



USAID
DEL PUEBLO DE LOS ESTADOS
UNIDOS DE AMERICA

PERU

**POLITICAS
EN SALUD**

USAID **50** ANIVERSARIO

Multiannual Investment Planning (PMI) in Health at the Regional Level

USAID/Peru/Políticas en Salud

Contract No. GHS-I-10-07-00003-00

Revised Draft

October 15, 2011

Prepared for:

Luis Seminario, COTR
USAID/Peru Health Office
Av. Encalada s.n.
Lima - Perú

Submitted by:

Abt Associates Inc.
4550 Montgomery Avenue
Suite 800 North
Bethesda, MD 20814

This document has been elaborated by USAID|Peru|Políticas en Salud Project, financed by the United States Agency for International Development (USAID) under contract No. GHS-I-10-07-00003-00.

The author's views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

Multiannual Investment Planning in Health at the Regional Level**Table of Contents**

Introduction	1
Resumen Ejecutivo.....	2
Executive Summary	3
1. Purpose	4
2. Objectives	5
3. Legal Basis.....	6
4. Scope of Application.....	7
5. Methodology for the elaboration of the Multiannual Investment Plan in Health within the framework for investment management at the regional level.....	8
5.1 Working Definitions.....	8
5.2 Principles and guidelines for PMI elaboration.....	11
5.2.1 Principles.....	11
5.2.2 Guidelines	12
5.3 Basic requirements for PMI formulation.....	12
5.3.1 Delimitation parameters	13
5.4 Basic concepts	14
5.4.1 Composition of the PMI team	15
5.5 PMI methodological framework	16
5.6 PMI planning unit	17
5.7 Objective of PMI planning	17
5.8 Organization of PMI elaboration	18
5.9 Steps for PMI elaboration.....	19
5.9.1 Analytical criteria for PMI elaboration	20
5.10 Description of PMI elaboration	23
5.10.1 Implementation of Step 1: Diagnosis of the network's installed capacity	23

5.10.2	Implementation of Step 2: Supply and demand analysis	32
5.10.3	Implementation of Step 3: Dimensioning of investments	43
5.10.4	Implementation of Step 4: Prioritization of investment project ideas.....	46
5.10.5	Implementation of Step 5: PMI elaboration and approval	49
6.	Recommendations for Implementation	52

Introduction

In order to expand the insured population and benefit coverage, the current reform of Universal Health Insurance (AUS) implies changing the health care model. An important part of the benefits sanctioned by THE AUS, embodied in the Essential Health Insurance Plan (PEAS), can be provided by health facilities closer to the citizens (categories I-1, I-2, I-3, II-4, and II-1). Additionally, an important part of the benefits under the Prioritized List of Clinical Procedures (LPIS) of the Public Health Insurance (SIS) and the National Sanitary Strategies must be provided by the latter health facility categories. This implies that the health system must upgrade the physical capabilities in these health facilities.

Along these lines, initially the reform must promote a new strategy for public investment in health leading to a strengthening of both first-level health care and the II-1 hospitals. This involves adopting a regional, medium- and long-term perspective; and giving responsibility for strengthening or implementation decisions to regional health authority, with support from the regional and local governments as holders of public investment resources.

In compliance with its governing functions, the Ministry of Health hereby presents a document entitled Multiannual Investment Planning in Health at the Regional Level (PMI), which develops a methodology to identify regional investment needs in health. The planning methodology detailed in it aims at: 1) estimating the magnitude of the health care gap in each region; 2) identifying a prioritized list of investment projects within a 4-5 year timeframe; and, 3) estimating the budget resources needed to gradually bridge the gap.

This technical document puts forward guidelines, principles, parameters, and decision criteria to reinforce the health facilities that make up the health care networks at the regional level. These new decision parameters comply with the requirements of both the AUS reform and the comprehensive health care model.

Resumen Ejecutivo

El Ministerio de Salud –con la asistencia del Proyecto- ha elaborado una propuesta de metodología de planeamiento multianual de inversiones con el propósito de contribuir a que los recursos de inversión disponibles en la actualidad estén orientados a elevar la cobertura de beneficios financiados por el seguro público (SIS) y que son ofrecidos por el nuevo plan denominado Plan Esencial de Aseguramiento en Salud (PEAS). Dicho esfuerzo supone elevar la capacidad resolutive del sistema prestador de salud en los ámbitos regionales.

La metodología para la elaboración de un Plan Multianual de Inversiones en Salud (PMI) en las regiones ha sido expuesta en una guía metodológica y aprobada por la RM 577/2011-MINSA.

El planeamiento multianual de inversiones en salud permitirá a los decisores de la inversión regional y local:

1. Cuantificar la brecha de infraestructura y equipamiento en el ámbito regional y local.
2. Identificar un listado priorizado de ideas de proyectos de inversión en salud para los próximos 4 a 5 años.
3. Cuantificar los requerimientos presupuestales para el cierre de la brecha.
4. Identificar requerimientos de inversión como mínimo para la red de servicios de salud.

A pesar de las ventajas de contar con mayores reglas de decisión desarrolladas desde hace diez años por el Sistema Nacional de Inversión Pública (SNIP), aún está pendiente el desarrollo de metodologías de identificación de ideas y necesidades de inversión con una mirada estratégica, global y rigurosa que permita ordenar el gasto de inversión y tenga implicancias en la mejora de la capacidad resolutive de los establecimientos de salud y que éstas sean percibidas por la población.

En ese orden de ideas, los principales beneficios de contar con un PMI son de orden político, social y presupuestal.

Entre los beneficios políticos, el PMI permite tener mayor claridad sobre el tipo de servicios de salud que necesitan los asegurados y la población en general (camas de internamiento, laboratorios, quirófanos, salas de ecografía, etc), lo cual permite establecer mejor comunicación con la población.

Entre los beneficios sociales se puede mencionar las mejoras en la percepción de la población respecto a los servicios que brinda el Estado, en particular el Gobierno Regional.

Entre los beneficios presupuestales, el PMI permitirá poder negociar con el Ministerio de Economía y Finanzas (MEF) un mayor incremento de los recursos de inversión, la revisión del Programa Multianual de Inversiones y una mejor estimación de los Proyectos de Inversión Pública.

Executive Summary

The Ministry of Health –with the Project technical assistance- has developed a proposed methodology for multiannual investment planning in order to contribute to the investment resources available today are targeted to increase the coverage of benefits financed by public insurance (SIS) and are offered in the new Essential Health Assurance (PEAS). This effort is to raise the response capacity of the health system providers at the regional level.

The methodology for the development of a Multi-Annual Investment Plan for Health (PMI) in the regions has been approved by the RM 577/2011-MINSA.

The multi-annual planning investments in health allow regional and local decision-makers to:

1. Quantify the gap in infrastructure and equipment at the regional and local levels.
2. Identify a prioritized list of project ideas for investing in health for the next 4 to 5 years.
3. Quantify the budgetary requirements for closing the gap.
4. Identify minimum investment requirements for the network of health services.

Despite the advantages of having decision rules developed over the past ten years by the National Public Investment System (SNIP), it is still necessary to develop methodologies for identifying investment ideas and needs with a strategic perspective, to allow rigorous investment spending with implications for improving the response capacity of health facilities that can be perceived by the population.

In that vein, the main benefits of having a PMI are political, social and financial. Among the political benefits, PMI allows for greater clarity on the type of health services needed by the insured and the general population (hospital beds, laboratories, operating rooms, ultrasound, etc.), which allows for better communication with the population.

Among the social benefits can include improvements in public perception regarding the services provided by the State, particularly the Regional Government.

Among the financial benefits, the PMI will be able to negotiate with the Ministry of Economy and Finance (MEF) a further increase of investment resources, revision of the Multi-Year Investment Program and a better estimate of the Public Investment Projects.

1. Purpose

Align the delivery of health services with the commitments under the new benefit plan (PEAS) and the strengthening of primary and first-level health care.

2. Objectives

1. Standardize the elaboration of multiannual investment plans in health at the regional level.
2. Organize investment expenditure in health.
3. Coordinate a rational use of public investment resources available at the regional and local levels.

3. Legal Basis

- Law No. 26842, General Health Act.
- Law No. 27657, Ministry of Health Act.
- Law No. 29344, Universal Health Insurance Law.
- Law No. 27293, National Public Investment System Act, modified by Law No. 28802.
- Supreme Decree 016-2009/SA, Essential Health Insurance Plan.
- Supreme decree No. 102-2007-EF, National Public Investment System by Law.
- Ministerial Resolution No. 546-2011/MINSA, approving NTS 021/MINSA/DGSP v.03, NTS on Health Facility Categories.
- Ministerial Resolution No. 003-2011-EF/68.01, approving the technical document “Strengthening First Level Health Care in the Framework of Universal Health Insurance and Health Decentralization, with Emphasis on Renewed Primary Health Care”.
- Directorial Resolution No. 003-2011-EF/68.01, approving the General Guidelines for the National Public Investment System.

4. Scope of Application

This technical document is oriented towards health departments, regional health directorates (or bodies acting in their stead at the regional level), and is relevant for all health facilities making up the regional governments' health care networks (from health facilities I-1 to II-1).

5. Methodology for the elaboration of the Multiannual Investment Plan in Health within the framework for investment management at the regional level

5.1 Working Definitions

Universal health insurance: A process oriented towards providing health insurance for all within the national territory. Health insurance covers access to preventive, educational, and rehabilitation benefits with efficiency, equity, timeliness, quality, and dignity under the Essential Health Insurance Plan (PEAS).

Supply-demand gap: The difference between supply and demand.

Resolution capacity: Health entities' ability to provide the kinds of services required to resolve the population's needs, including user satisfaction (it depends on the specialization and the technical level of available resources).

Portfolio of services: An ordered list of services provided by a health facility, including their definitions and how they are related to each other.

Health facility category: Group of health facilities of similar complexity and characteristics. It is made up of Service Producing Units, which determine jointly its resolution capacity. Health facility categories are designed to respond to specific socio-sanitary realities and demands.

Referential UPSS portfolio: An ordered list of health service producing units (for direct and support care) at each complexity level for the delivery of services under the current benefit plans. For instance, PEAS requires 13 UPSS types in all health facilities making up a health service network (I-1 to II-1). The UPSS portfolio is associated with a list of referential UPSS environments in all health facilities when they have the UPSS. For health facilities I-1 to II-1, a list of 31 referential environments is estimated.

Referential portfolio of clinical procedures: An ordered list of clinical procedures provided under benefit plans, especially the PEAS benefit plan, and which need to be linked to each complexity level. For the set of health facilities making up a health service network, 241 clinical procedures can be delivered at each level. For investment purposes, it is estimated that level I could provide 111 clinical procedures; and that 241 procedures could be delivered under category II-1.

Categorization: Classification of health facilities according to their complexity level and functional characteristics.

UPSS standard cost: Budget resources required to implement a UPSS based on standard equipment and infrastructure parameters for each complexity level.

UPSS distribution criteria: Referential elements guiding decisions regarding the geographic location of service production units, with an aim to improve access to services under the current benefit plans and public health programs.

Prioritization criteria: Referential elements guiding the order of precedence for investment project ideas.

Demand for health services: Individual or collective health needs. This demand has two elements: qualitative demand, i.e. the health needs that motivated the demand of health services and their severity; and quantitative needs, i.e., their volume; in other words, the number of people experiencing health needs within a certain time and space.

Structure: The human, physical, and technological resources that determine the service supply's resolution capacity. They are classified in Health Service Producing Units according to: a) size, i.e., the amount of resources necessary to deliver health services adequate to the volume of the population's health needs (it determines the quantitative resolution capacity); and b) technological level, i.e., the specialization and technical level of the resources required to deliver health services adequate to the severity of the population's health needs (it determines the qualitative resolution capacity).

Production standards: The productivity level achievable by a UPSS if provided with the necessary resources.

Project idea: A first approach to an intervention aimed at resolving a problem, identifying unsatisfied needs, objectives, and main investments.

Hospital security index: A tool providing an immediate notion of a hospital's security level, given its key role in a jurisdiction and the need for continued functioning in the face of an adverse event.

Safe hospital: A health facility delivering continuously accessible services at full capacity and in the same premises, immediately after a high-intensity, destructive event. It implies structural stability, permanent availability of basic health services, and adequate internal organization.

Complexity level of health facilities: The degree of differentiation and development of health facilities, achieved via resource specialization and technical enhancement. The level of complexity is directly related to health facility categories.

Supply of health services: Health system resources oriented towards meeting the population's health needs. It is made up of the following elements: a) structure, i.e., the human and technological resources that determine the service supply's resolution capacity, organized in Health Service Producing Units in terms of their size (amount of resources required to produce health services adequate to the population's health needs) and technological level (specialization and technical level required to produce health services adequate to the severity of the population's health needs); b) resolution capacity, i.e., the health facilities' capacity to produce the services necessary to meet the population's health needs; and c) supply capacity, i.e., the capacity of a facility's resources to produce adequate services to meet the volume of the population's needs (depends on the amount of available resources).

Infrastructure parameters: Minimum characteristics and requirements for UPSS environments in health facilities. They vary according to the complexity level and are

associated with a list of referential environments, kinds of associated environments, minimum areas, and architectural functionality.

Equipment parameters: Minimum characteristics and requirements for UPSS biometrical equipment, medical and surgical instruments, and medical and office furniture.

Essential Health Insurance Plan (PEAS): A minimum prioritized list of insurable conditions and interventions provided to all affiliates by public, private, or mixed health insurance funds. It includes explicit guarantees regarding timeliness and quality. It details over 600 clinical procedures which affiliates are entitled to.

Multiannual Investment Plan in Health (PMI): A planning tool to identify investment needs and priorities to bring the health supply in line with the commitments under the new benefit plan (PEAS), and with strengthening primary and first-level health care. The process, undertaken by regional governments, aims at ordering investment expenditure in health and coordinating a rational use of public investment resources.

Multiannual Public Investment Program (PMIP): a set of Public Investment Projects (PIPs) to be implemented over a period of not less than three years. PIPs must be sorted according to sectoral, regional, or local policies and priorities.

Master Plan for Investments in Hospitals and Institutes: A planning, negotiation, and management tool for short-, medium-, and long-term investment processes aimed at strengthening hospitals' and institutes' capacities through efficient resource allocation.

Public Investment Project (PIP): A time-limited intervention using public resources totally or partially, with an aim to regain, increase, or improve an entity's capacity to produce or deliver goods or services. Benefits are created over the lifespan of the project and must be independent from other projects. A PIP must address a problem linked to an entity's objective and competencies. Implementation can take place over more than a fiscal year according to the implementation timetable established in the pre-investment studies. Operation and maintenance expenses are not considered PIPs.

Re-categorization: A process whereby a health facility is assigned to a different category.

Health Service Network: A set of health facilities with different resolution capacities and complexity levels, interrelated by a road network and social corridors, and functionally articulated. Complementarity of services ensures an efficient use of resources and the delivery of a set of prioritized health services within a given geographical area.

Health technology: A set of resources necessary for delivering health services, including mechanisms, equipment, systems, software, supplies, medicines, biotechnology, and medico-surgical procedures used for promotion, prevention, diagnosis, treatment, and rehabilitation purposes.

Planning unit: A set of health facilities located in a given territory, and subject to analysis, decision-making, and estimation of future physical resource requirements with an aim to improve their resolution capacity regarding health care delivery. In this case, the minimum planning unit is the health care network.

Analysis unit: A subset of health facilities within the planning unit, which is instrumental in estimating basic requirements at a smaller scale. In this case, the minimum analysis unit is the micro network.

Service Producing Unit (UPS): The basic functional unit in a health facility, made up of all the human and technological health resources (infrastructure, equipment, medicines, health procedures, etc.) It is organized to develop homogeneous functions and deliver certain services in line with its complexity.

Health Service Producing Unit (UPSS): A UPS organized to develop homogeneous functions and deliver certain health services in line with its complexity. UPSSs can be divided in those associated with a health facility's *operational processes* (direct health care, research, and training); and those associated with *support processes* (health support services).

Investment Unit: A combination of a UPSS and its associated referential environments, which must be considered among the physical resources required in a potential investment project.

5.2 Principles and guidelines for PMI elaboration

5.2.1 Principles

Coordination between political authorities and regional and local health managers, based on an assessment and technical proposal led by the regional health authority.

The ongoing devolution of health functions to regional governments includes the delegation of investment decisions. In this context, it is necessary to develop a process for designing a Multiannual Investment Plan for each Regional government, based on a technical assessment (identification of the supply-demand gap) and coordinated between regional and local authorities and other institutions providing health services. Prioritization of investment expenditure must result from coordinated criteria; be in line with the commitments detailed in the benefit plans in place; and respond to health needs, with emphasis on addressing equity gaps, and promoting resource rationalization and complementarity.

Flexibility in engaging diverse participants to enrich the process and enhance feasibility and sustainability of investment project ideas created under this process.

Especially, participation of various participants in charge of public investment resources in the regions should be encouraged. This is intended to add flexibility to the financing process between the regional and local governments; promote an adequate prioritization of investment ideas; and enhance feasibility within the 4-5 year implementation timeline proposed by the PMI. It should be noted that the distribution of the investment budget has tilted towards local governments in recent years.

Promotion of public-private partnerships and social responsibility initiatives aimed at bridging equity gaps. A sectoral approach to engaging private initiative must be promoted, with an emphasis on reducing gaps identified in less-favored segments; and on delivering health services that are either insufficiently provided by the public subsector or better

entrusted to private providers (e.g., diagnosis and treatment services, specialized outpatient care in rural areas, etc.), given their budgetary requirements.

5.2.2 Guidelines

Extension of benefit coverage and sanitary priorities

The PMI identifies investment project ideas aimed at achieving one of the main purposes of the AUS reform —namely, extending benefit coverage— and resolving the most pressing health problems at the national, regional, and local level. It is not intended to address all investment project ideas, but only those identified as priorities.

Technological adaptation and upgrading in response to health needs and demands

The investment project ideas that will result from this methodology must be oriented towards adapting or upgrading the existing supply of health services in line with the latest technological improvements and with demand needs through new ways of organizing services.

Territorial planning of investments in health at different complexity levels

Investment planning at the first health level uses the network as minimum planning unit to articulate health facilities within a given territory. The aim is to enhance their resolution capacities for expanding effective coverage of the SIS benefit plan and the National Sanitary Strategies; and for strengthening the primary health care model, with the family and the community as main focus.

Investment for health promotion, prevention, and management

It is essential to improve the resolution capacity for the prevention and early diagnosis of diseases, emphasizing the first health care level; acquire adequate equipment for effective health promotion (multimedia equipment, suitable physical environments, etc.); and strengthen and facilitate health management. An appropriate articulation between health producing units (at both the hospital and health service network levels) requires, for example, strengthening computer and communications technologies, health-related and geographic information systems, and monitoring and assessment systems, among others. Adequate clinical management requires computerization of appointments (outpatient services, diagnosis, and hospitalization), clinical records, medical imaging services, laboratory reports and images, etc.

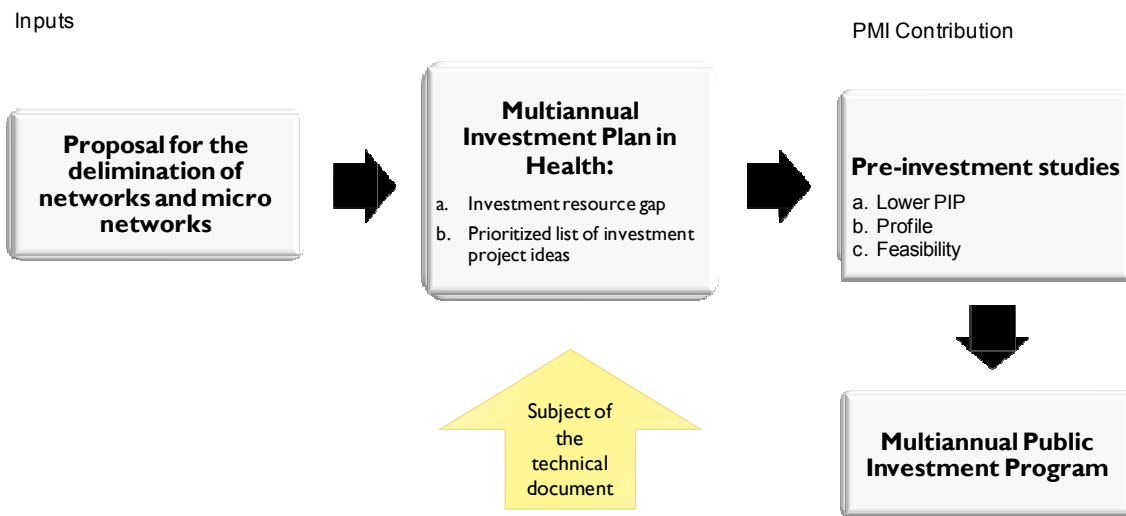
Investment for complying with safe hospital standards against disasters

Pre-investment studies for investment project ideas emerging from the PMI methodology must include the technical and budgetary requirements necessary to adapt new and existing health facilities to safe hospital standards against disasters.

5.3 Basic requirements for PMI formulation

PMI formulation requires a revised specification of hospital environments, networks, and micro networks as main input.

The PMI's main contribution is to guide the formulation of pre-investment studies and, later, define more precisely the three-year PMI.

Figure 1. Basic requirements for initiating PMI formulation. PMI contribution

5.3.1 Delimitation parameters

Delimitation of service delivery environments at the three health care levels requires compliance with the following parameters:

- The review process for delimitation must be led by the relevant regional health authority (Health Directorate, Regional Health Directorate or Office, or bodies acting in their stead).
- The review process for delimitation must involve the participation of actors from the delimited environment (directors of health facilities, mayors, community leaders, and other relevant participants).
- The distribution of health entities making up the health micro networks must ensure that a majority of the population in the assigned populations can access the nearest health facility in less than 60 minutes in predominantly urban areas, and in between one and three hours in predominantly rural areas.
- The basic criterion for network delimitation must be **the interconnection of health micro networks** via road networks and social corridors; and **reference flows** for medium-complexity health care must be established to ensure the delivery of largest possible number of health services.
- Delimitation of environments for second- and third-level hospitals requires establishing **reference flows** from first-level health facilities for medium- and high-complexity services, as well as defining the referential population with the purpose of estimating the potential demand for those services.
- Reference flows** must be defined for specialized outpatient services, emergencies, diagnosis support, and medium- and high-complexity services.
- The location points for support services must be specified so as to promote complementarity between: a) communication and patient transportation networks;

b) warehouses; c) computer networks; d) referential public health laboratories; e) solid waste from health facilities and medical support services.

5.4 Basic concepts

In order to expand population and benefit coverage, the current universal health insurance reform requires changes in the delivery model and in the organization of health services. An important part of the benefits considered in the AUS reform can be delivered by the health facilities closer to affiliates (categories I-1 to II-1). This implies that health care must be based on prevention and promotion in all recovery and rehabilitation services.

The change in the health delivery model requires improvements in the resolution capacity of the provider system that is the closer to the population (health facilities I-1 to II-1), especially regarding human and physical capacities, in such a way that citizens can have access to most of the benefits under the PEAS, the LPIS, and the National Health Strategies.

The features of the health care model requiring an improved prioritization of investment expenses are: continuity, comprehensiveness, and timeliness. Investment decisions must ensure that affiliates can access health care services in a set of health facilities covering different phases in the evolution of the health-disease process; that services are delivered when affiliates require them; and that it does not affect or deteriorate their initial condition.

Along these lines, the initial phase in the implementation of universal insurance must focus on improving the physical capacity of first-level delivery and second-level hospital care (health facilities in categories I-1 to II-1).

Therefore, it is necessary to promote strategic planning exercises in public health investment. This requires that the regional health authority adopt a regional medium- and long-term approach.

The criteria for the existence, growth, and development of service delivery must emerge from specific health needs and fulfill them quantitatively and qualitatively. The main analytical tools to achieve this are the resolution capacity and the structure of supply.

Regarding health care levels, it is necessary to link the magnitude and severity of health problems (demand) with feasible, effective, and efficient production functions (supply). This concept is central to health care organization.

Theoretically, it is suggested that a well-functioning first-level should meet at least 70%-80% of the demand via large-scale, low-complexity services, with resources characterized by lower specialization and technical levels, and higher quantitative and lower qualitative resolution capacities. At this level, the health service production function focuses on activities oriented towards preserving the population's health via promotion policies, specific protection, early diagnosis, and timely treatment of frequent pathologies using simple resources.

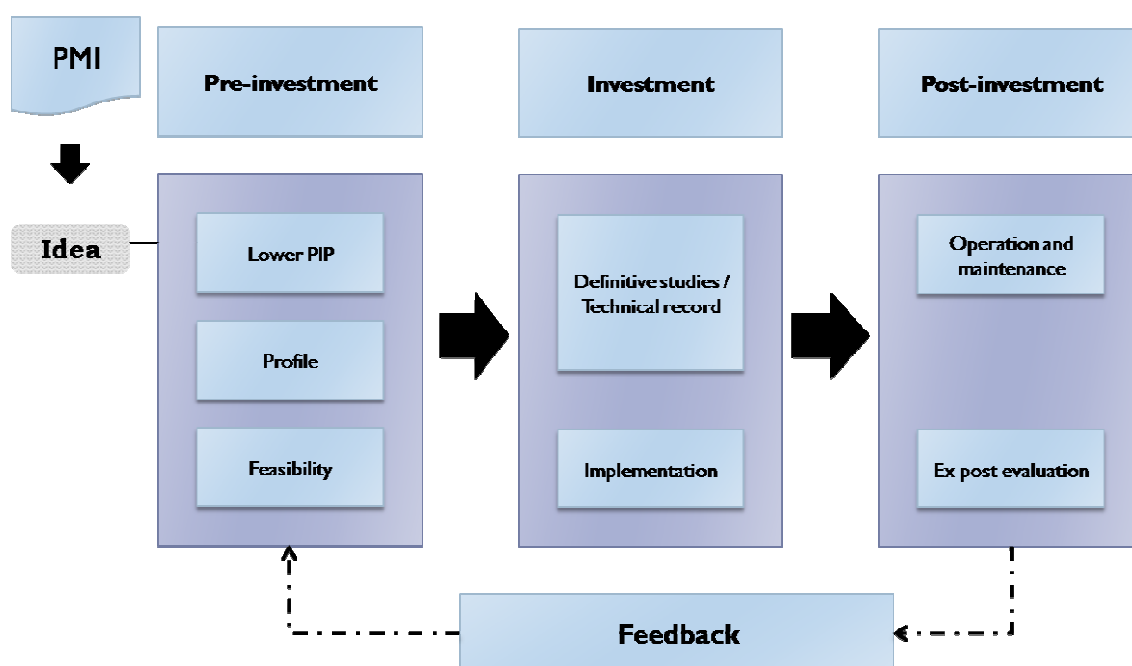
In addition, the second level of health care could meet 12% to 20% of demand as a complement to the Comprehensive Health Care initiated in the preceding level, thus adding a higher degree of specialization in both human and technological resources. This

provides a set of health services aimed at meeting needs associated forwarded from the first level of health care or assisting persons going to first-level health facilities in case of emergency.

Finally, the theoretical framework states that the third level of health care should meet 8% to 10% of demand associated with severe health problems requiring high-complexity care. This is the level with higher specialization and resolution capacity regarding human and technological resources, oriented towards resolving problems forwarded from the previous levels and assisting persons going to health facilities in this level for emergency cases.

The PMI methodology presented in this technical document aims at ordering the current rationale for generating of investment project ideas. It incorporates new parameters and proposes an analysis and decision sequence with an aim to obtain a prioritized list of investment project ideas for health facilities in categories I-1 to II-1. These ideas will initiate the investment project cycle in the framework of the National Public Investment System (see Figure 2).

Figure 2. Relation between the PMI and the investment project cycle



5.4.1 Composition of the PMI team

In a process of such importance, all necessary actions to strengthen investment coordination at the regional level must be undertaken. The Regional Government and DIRESA (or bodies acting in their stead) face the challenge to maintain an adequately organized process capable of leading the coordination with local governments.

The members of the PMI team must be designated by the Regional President or the Regional Health Director with approval from the regional government.

The participation of an official from the Investment Office and the Social Development Office in representation of the regional government is recommendable. In representation of DIRESA, the participation of the Director or General Manager, the Executive Health Director, the Director of Health Services, and institutional development chiefs (or officials acting in their stead) is recommended.

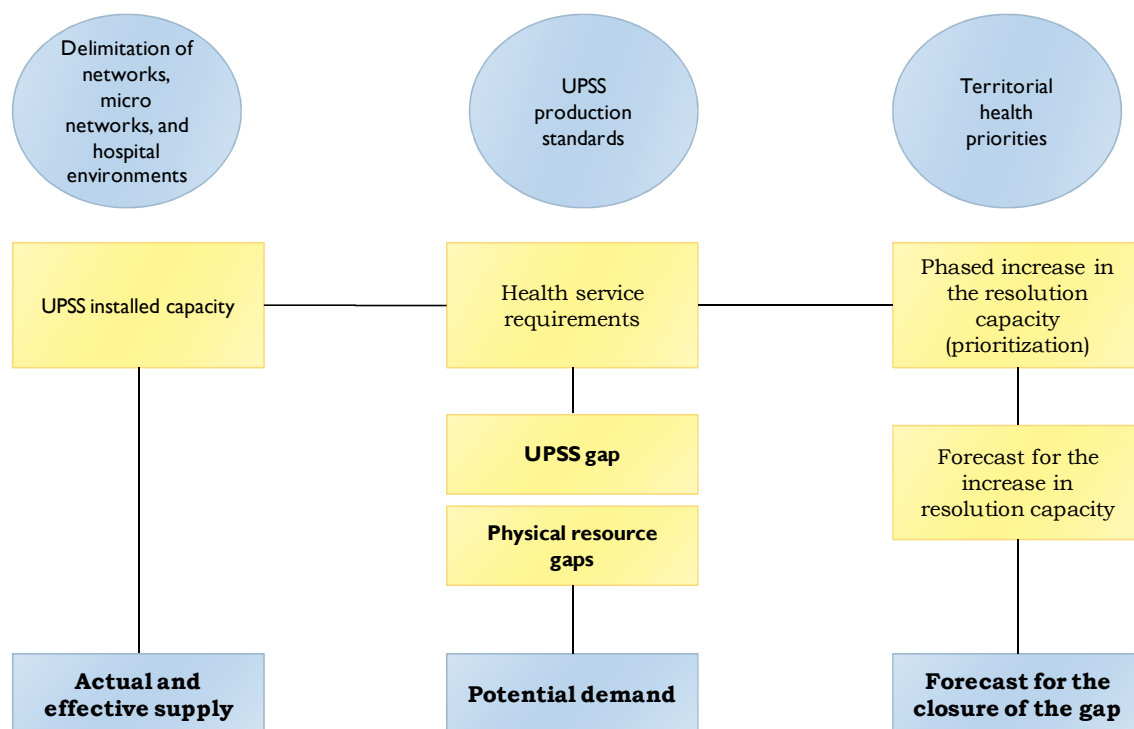
The selection of PMI team members must be based on professional and technical profiles, taking into consideration skills adequate to the proposed objectives. The following skills can be highlighted: teamwork abilities, negotiation capacities, experience in public health, management of participatory workshops, and connections with opinion leaders, among others.

The PMI team should include all health and hospital networks under a regional government. It is recommended that these entities be represented by persons whose outstanding decision-making capacities and technical competence can strengthen the methodological process described in this technical document.

The PMI team must be enacted formally and installed within five days of its creation. Sessions will take place at least three times per month during the preparation the regional PMI. It must submit its action plan to the regional government and to DIRESA within 15 days of its installation and inform periodically of its progress.

5.5 PMI methodological framework

The strategic planning of the regional government's public investment in health starts out identifying the real and effective supply by networks, micro networks, and hospitals. Information is obtained regarding the installed capacity of service producing units (UPS) available in each environment (see Figure 3). Potential demand is then estimated on the basis of the population associated with the field of analysis. This information provides an initial estimation of the UPPSs required to deliver all the services under the SIS benefit plans and the public health programs in place. A comparison with the analysis of UPS then reveals the magnitude of the service and resource gaps. Finally, based on the territory's health priorities, the gradual bridging of the supply gap is then estimated using prioritization criteria and identifying the public resources for investment (regional and local governments).

Figure 3. Methodological framework for the PMI

5.6 PMI planning unit

The planning unit is the health network; i.e., the analysis, estimations and prioritization are made for all health networks in the regional government. For these units, the estimation focuses on the supply of services with the largest demand volume, and may cover health facilities in categories I-1 to II-1. The population relevant for the estimation of demand is the one assigned to health facilities. In the case of II-1 hospitals serving other networks, the population relevant for the estimation of demand is their own population and the referential one.

5.7 Objective of PMI planning

Strategic investment planning focuses on health technologies. The latter are addressed to individuals, families, the community, and the environment. This kind of public investment is oriented towards improving the physical capacity of health facilities to provide improved services to individuals and collectivities.

In the case of individual health technologies, investment planning focuses on clinical and support technologies. Both are organized in direct and support care UPSSs and require general service UPSSs to operate regularly.

Health technologies related to health collective services also require some UPSSs and general service UPSSs.

Additionally, it is necessary to improve the managerial and clinical abilities of the health personnel to ensure an efficient use of the new resources assigned to health facilities.

5.8 Organization of PMI elaboration

Once the PMI team is formed and its action plan has been approved by the regional government, a series of workshops for the application of the methodology are initiated. Previously the PMI team must discuss the proposal regarding network, micro network, and hospital environment (II-1) delimitation, with an aim to verify if the design of the proposal complies with the parameters specified in this technical document; and then decide whether to launch the elaboration of the PMI (see Section 5.10).

Before taking the five steps, the PMI methodological framework is presented and the instruments discussed in a technical meeting.

As PMI elaboration is a strategic planning exercise based on explicit criteria, the composition of task forces for the implementation of each step varies according to the nature of the planning exercise. It is proposed that the composition of the task forces in charge of undertaking the implementation steps should meet the following recommendations:

Table 1: Recommended composition of workshops for PMI elaboration

Steps	Recommended composition of workshops
Step 1: Diagnosis of installed capacity <i>(One 2- to 3-day workshop per micro network or hospital)</i>	<ul style="list-style-type: none"> • Regional government planning and investment department • Local government planning and investment department • PMI team • Hospital directors and managers • Network managers • Micro network managers
Step 2: Supply-demand analysis <i>(One 1-day workshop)</i>	<ul style="list-style-type: none"> • Regional government planning and investment department • Local government planning investment department • PMI team • Hospital directors and managers • Network managers • Micro network managers
Step 3: Dimensioning of investments <i>(One 2-day workshop)</i>	<ul style="list-style-type: none"> • Regional government planning and investment department • Local government planning and investment department • PMI team • Hospital directors and managers • Network managers

Steps	Recommended composition of workshops
	<ul style="list-style-type: none"> • Micro network managers
Step 4: Prioritization of investment ideas <i>(One half day workshop)</i>	<ul style="list-style-type: none"> • Regional government officials • Local government officials • Regional government planning and investment department • Local government planning and investment department • PMI team • Hospital directors and managers • Network managers • Micro network managers
Step 5: PMI elaboration and approval	<ul style="list-style-type: none"> • Regional government planning and investment department • Local government planning and investment department • PMI team

As this is the case of a regional PMI, the number and structure of task forces will depend on the complexity and number of planning units at the regional level. One way to organize these discussion spaces is to convene networks in different social corridors. The main challenge facing these task forces is to form a consensus regarding where to develop the physical capacities of planning units (networks or hospitals).

5.9 Steps for PMI elaboration

The PMI elaboration process described in this technical document involves developing the following steps:

- I. **Step 1: Installed capacity diagnosis.** Made for the planning unit level; i.e., for each network under the regional government.
- II. **Step2: Supply and demand analysis.** Based on the results from the previous step, UPSS and physical resource requirements in the planning unit are estimated. This is done through a health service planning exercise aimed at foreseeing future investment decisions. The result of the analysis contrasting the potential demand for health services under the PEAS with the forecast of future supply establishes the UPSS and resource gap in every health network; i.e., a first list of investment needs within the network is obtained.
- III. **Step 3: Dimensioning of investments.** A list of investment project ideas is obtained as a result of classifying and aggregating the investment needs established in the previous step. The cost of the investment project ideas in

each health network under the regional government is also estimated. Standard UPSS cost parameters are used for this purpose. The outcome of this step is the cost for the list of investment project ideas in each network.

IV. **Step 4: Prioritization of investment ideas.** This step starts from the validation of the prioritization criteria suggested in the technical document. It also defines the investment sequence defined by the regional government, which is instrumental in identifying the order of precedence of investment project ideas for the next 4 to 5 years.

V. **Step 5: PMI elaboration and approval.** This step involves compiling the outcomes from applying the methodology, submitting them to the regional government for approval, and eventually also to the local governments for incorporation into their investment budgets.

Figure 4. Steps for PMI elaboration



5.9.1 Analytical criteria for PMI elaboration

Prior to implementing the steps, it is necessary to identify the elements that will be analyzed and will guide the implementation process.

- i. **Step 1:** Its main analytical component is the set of clinical procedures enacted by S.D. No. 016-2009/SA (PEAS), including the individual health procedures in the current public health programs. This list is made up of more than 600 clinical procedures to be delivered at the three health care levels.

For each procedure, the required UPSS is identified; and, based on NTS 021/MINSA/DGSP v.03 (Technical Norm for Health Facility Categories), a referential UPSS list by health facility category is proposed.

Another analytical element is the list of available infrastructure by UPSS and health facility category; i.e., for each group of clinical procedures, a minimum requirement to be met by the system has been identified. Additionally, the equipment list by UPSS, sorted by clinical procedure groups, is used.

In sum, step 1 has four analytical components: a) clinical procedures; b) available referential UPSSs by health facility category; c) available infrastructure by UPSS and health facility category; and d) available equipment by UPSS and health facility category.

- ii. **Step 2:** In this step, two elements are used as parameters for estimating demand: a) the probability of occurrence of conditions covered by the PEAS, and b) the probability of health service usage.

Implementation requires an initial UPSS planning exercise based on parameters for health service organization.

Service and UPSS producing standard are another analytical component of step 2. They are instrumental in performing a first estimation of the gap between services and resources in every planning unit (the network).

- iii. **Step 3:** Its analytical component is the referential list of Investment Units; i.e., starting from a list gathering UPSSs that need to be developed jointly, an initial list of investment project ideas is identified. The latter is valued using Standard Costs per UPSS. Both elements are provided by this technical document.
- iv. **Step 4:** It uses the prioritization criteria as main analytical component and considers the investment sequence established by the regional government. Flexible prioritization criteria are proposed, as each regional government can adjust them in line with the priorities established by the highest regional political authority.
- v. **Step 5:** Control of the approval mechanism lies with each regional government, and must be discussed during the process. Another analytical component is the PMI visibility mechanism in charge of each regional government. It is proposed that it should be linked to the MEF's PMIP.

Figure 5. Analytical components of the PMI elaboration process

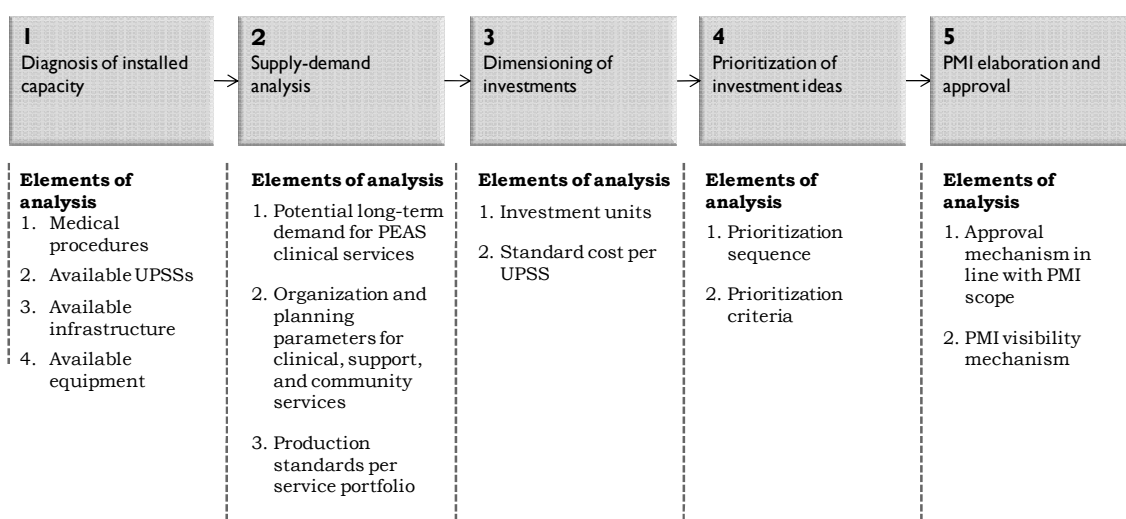
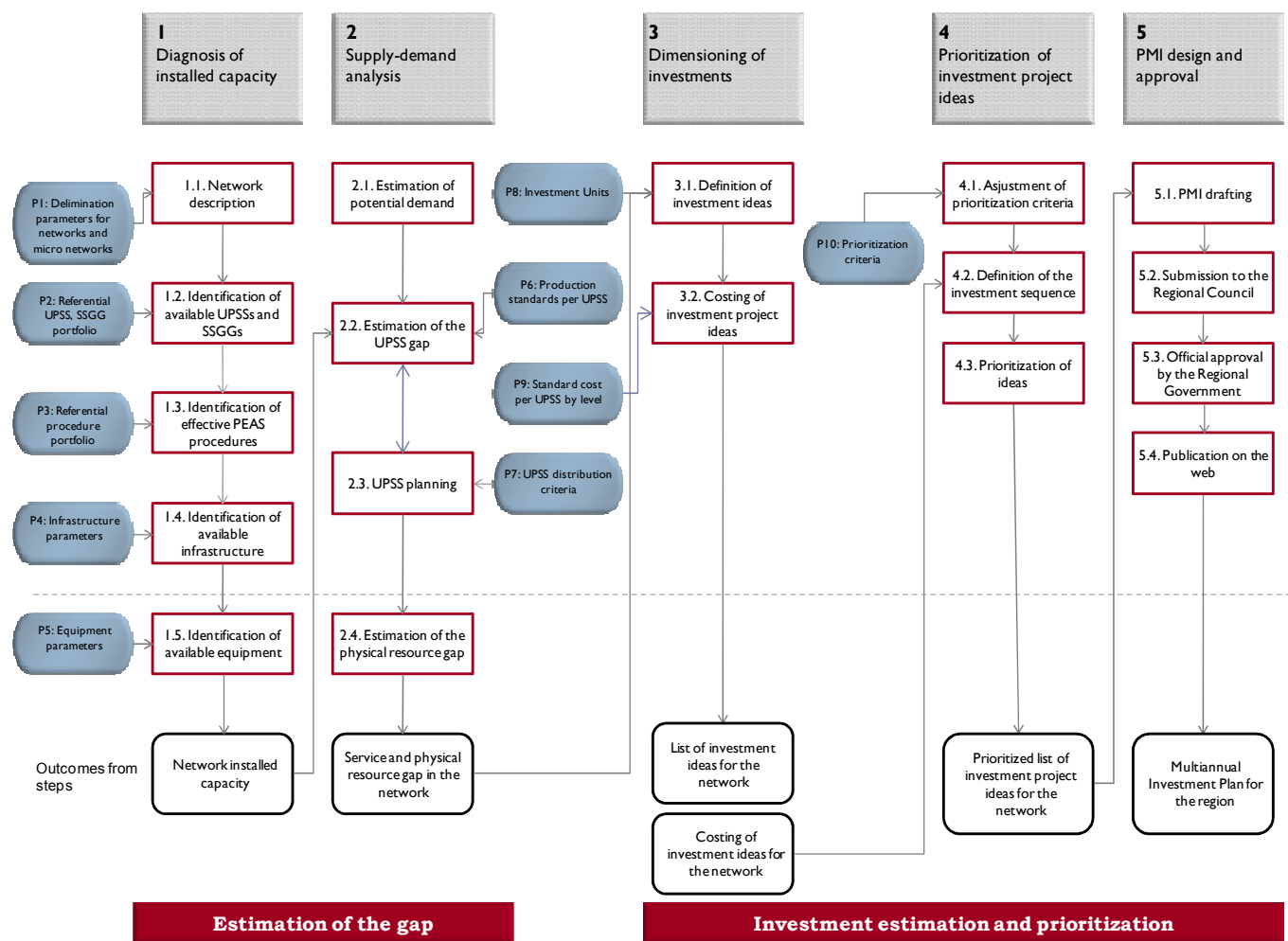


Figure 6. Description of the steps for PMI elaboration



5.10 Description of PMI elaboration

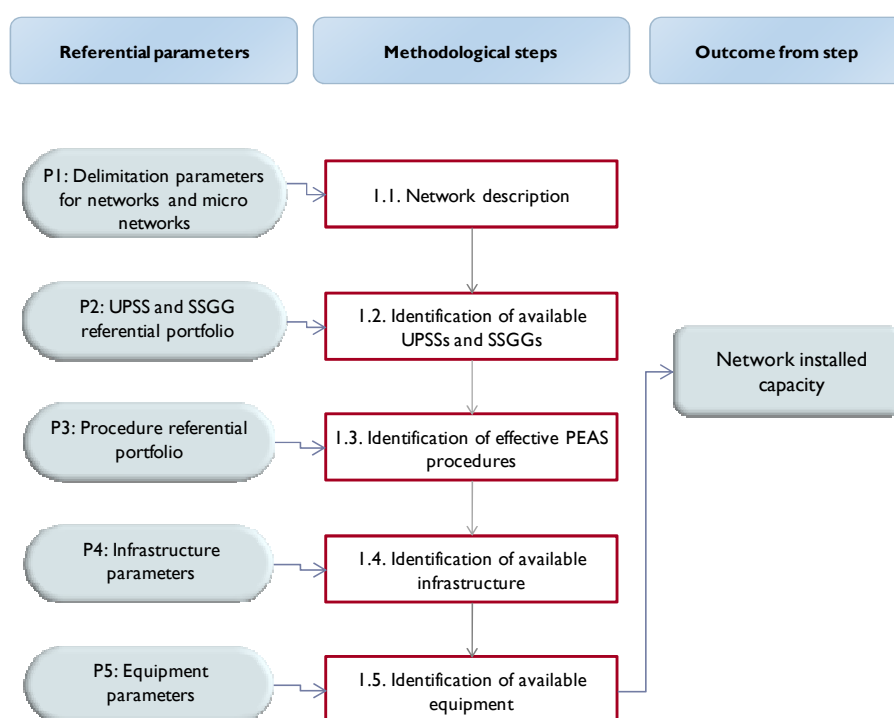
It has been mentioned that, prior to initiating the PMI elaboration process, the regional health authority needs to conclude the review of network, micro network, and II-1 hospital environment delimitation. This requires a clear definition of the population size, the territory associated with the first health care level, and the reference areas for hospital services.

5.10.1 Implementation of Step 1: Diagnosis of the network's installed capacity

The result of the implementation of Step 1 is the chapter entitled “network installed capacity”. In this case, the technical document develops the parameters for the health network as planning unit (for health facilities I-1 to II-1).

As shown in Figure 7, Step 1 comprises 5 sub-steps, which will be instrumental in establishing the resolution capacity of the facilities in the health service network regarding physical resources. In this respect, the technical document suggests five parameters as benchmarks for the description of the health network's installed capacity. The data resulting from implementation of this step are recorded in the IDEA, v01 application.

Figure 7: Installed capacity diagnosis



Implementation of sub-step 1.1: Description of the planning unit

The success of the PMI elaboration process for the health service networks depends on the degree of clarity in the delimitation of the health micro networks and the network. It is suggested that, prior to initiating the process, the regional health authority should verify if the current delimitation of micro networks and the network meets the parameters explained in section 5.3.1. If the current organization complies with the parameters, implementation can proceed. If the parameters are not fulfilled, it is recommended to

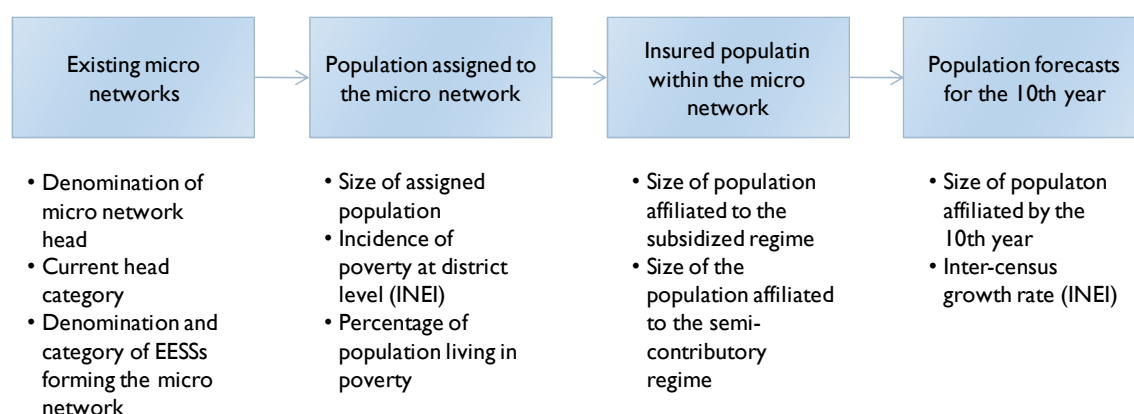
reformulate the delimitation of the network and the micro networks, as any organizational inconsistency will have implications for public investment requirements.

This sub-step requires a description of variables that are instrumental for planning. There are two kinds of variables: a) variables associated with the micro networks in the health service networks; and b) variables associated with the II-1 hospital (if it exists) that will become the network head.

The following variables are considered in the case of micro networks:

1. **Existing micro networks:** A description is provided for the denomination of the micro network head and for the denomination and category of all health facilities in the micro network.
2. **Population assigned to the micro network:** A description is provided for the size of the assigned population, the district poverty incidence rate (provided yearly by INEI), and the percentage of the population living in poverty.
3. **Insured population in the micro network:** A description is provided of the current number of affiliates in the subsidized and semi-contributory regimes and of the estimated insured population by the 10th year.
4. **Population forecast by the 10th year:** A description is provided of the population insured under both regimes by the 10th year, using the rate of inter-census growth and forecasts for affiliation to both regimes for the same period.

Figure 8. Variables for the description of the planning unit (micro network)



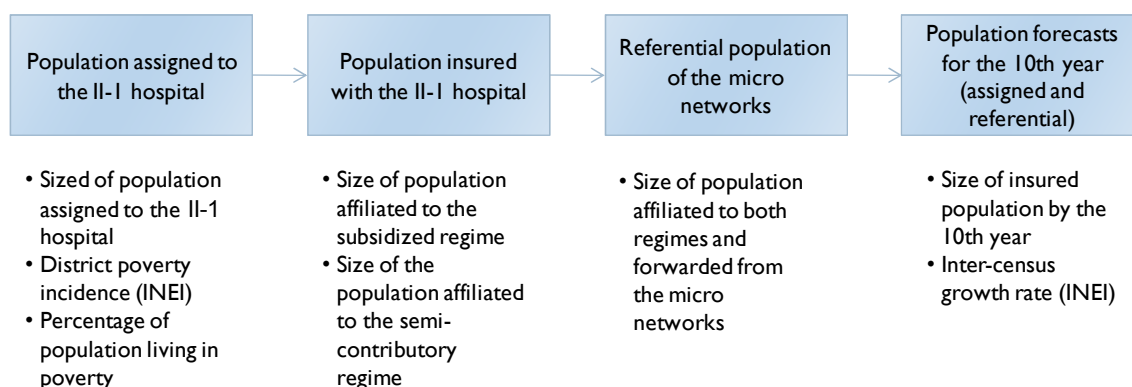
In the case of the II-1 hospital, the following variables are considered (Figure 9):

1. **Population assigned to the II-1 hospital:** A description is provided of the size of the population assigned to the II-1 hospital (in case the latter complies with this characteristic), the district poverty incidence rate (provided yearly by INEI), and the percentage of the population living in poverty.
2. **Population insured in the II-1 hospital:** In case the hospital has been assigned a population, a description is provided of the latter's size, the district poverty incidence

rate (provided yearly by INEI) and the percentage of the assigned population living in poverty.

3. **Referential population in the micro networks:** A description is provided of the current size of the population affiliated to the subsidized and semi-contributive regimes of the micro networks, which is forwarded to a hospital for the resolution of medium-complexity cases.
4. **Forecast of the population by the 10th year:** A description is provided for the size of the referential population in the micro networks and of the population assigned to hospitals, both by the 10th year, using the inter-census growth rate and affiliation forecasts for both regimes in the same period.

Figure 9. Variables for the description of the planning unit (II-1 hospital)

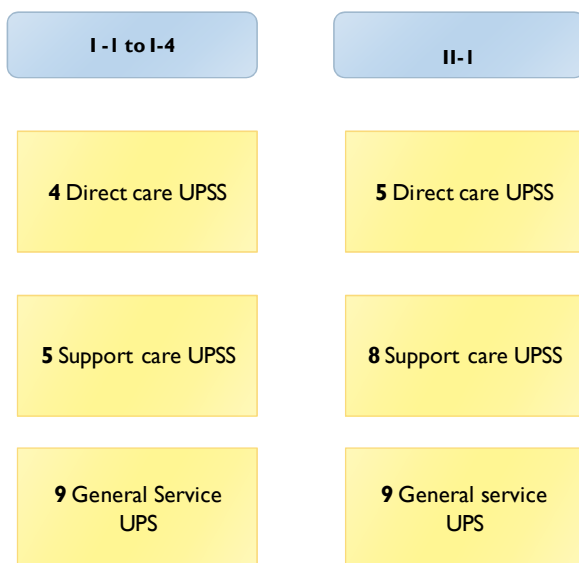


Implementation of sub-step 1.2: Description of available General Service (SSGG) UPSSs and UPSs

This sub-step uses the parameters for referential General Service UPSSs and UPSs by complexity levels described in Appendices 1-A and 1-B.

These parameters establish that, for the delivery of SIS benefit plans and of individual and collective services under the public health strategies, up to 13 and 9 types of General Service UPSSs and UPSs, respectively, are required to form a service network. NTS No. 021-MINSA/DGSP v.03 establishes that in such first-level environment (I-1 to I-4) there could be 9 UPSSs (4 for direct care and 5 for support care). Complementarily for the same environment, this technical document suggests 9 types of General Service UPS types (see Figure 10).

In the case of the II-1 hospital, UPSS parameters are: 5 types of direct care UPSSs, 8 kinds of support UPPSs, and 9 General Service UPSs (see Figure 10).

Figure 10. Referential UPSS and UPS parameters for the planning unit

In the case of health facilities I-1 to I-4 (first level), four types of **direct care UPSS** could exist, depending on their complexity level: a) outpatient facilities; b) emergency; c) obstetrical center, and e) internment (see Figure 11). In the case of the II-1 hospital (which could be the network head), five kinds of direct care UPSSs are possible: a) outpatient facilities , b) emergency; c) obstetrical center; d) hospitalization; and e) surgical center.

In the case of **support care UPSSs**, it is suggested five types: a) pharmacy; b) clinical pathology (laboratory); c) imaging diagnosis; d) rehabilitation medicine; and e) sterilization center. For the II-1 hospital, 8 types are proposed: a) pharmacy, b) clinical pathology (laboratory); c) imaging diagnosis; d) rehabilitation medicine; e) sterilization center; f) nutrition and dietetics; g) pathological anatomy; and h) hemotherapy.

Figure 11. UPSS types for health services networks

	I-1 to I-4	II-1
Direct care UPSSs	Outpatient facilities	Outpatient facilities
	Emergency	Emergency
	Obstetrical center	Obstetrical center
	Internment	Hospitalization
		Surgical center
Support care UPSSs	Pharmacy	Pharmacy
	Clinical pathology	Clinical pathology
	Imaging diagnosis	Imaging diagnosis
	Rehabilitation medicine	Rehabilitation medicine
	Sterilization center	Sterilization center
		Nutrition and dietetics
		Pathological anatomy
		Hemotherapy

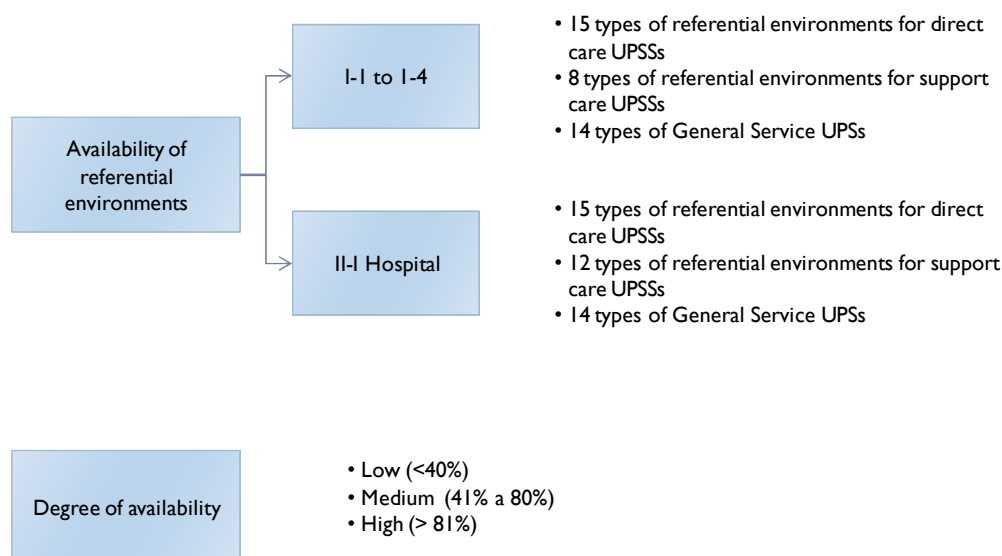
It is important to recall that Health Service Producing Units (UPSSs) are organized to perform homogeneous functions and produce certain health services according to their complexity. The purpose of describing the UPSSs available in the network is that later it will be possible to describe the available physical resources (infrastructure and equipment) in these planning units, thus providing key information for estimating the physical resource gap in Step 2.

Description variables

- **Availability of UPSS and SSGG referential environments.** The existence of referential environments in each micro network will be recorded. It is not necessary to specify the exact location or number. The parameters described in **Appendices 1-A and 1-B** are used for this purpose.

Degree of UPSS and SSGG availability. The availability level will be estimated identifying the percentage of available UPSSs and referential environments in every micro network and in the II-1 hospital.

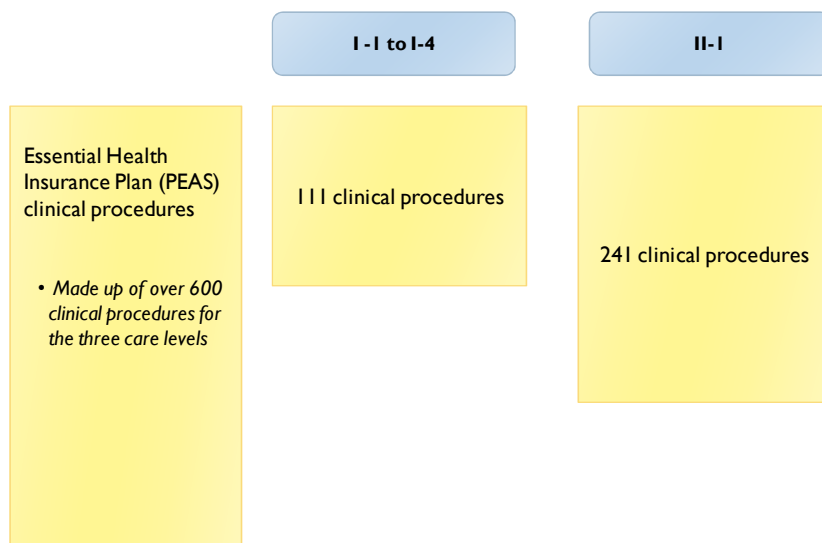
Figure 12. Description variable for UPSSs and General Service UPSs available in the network



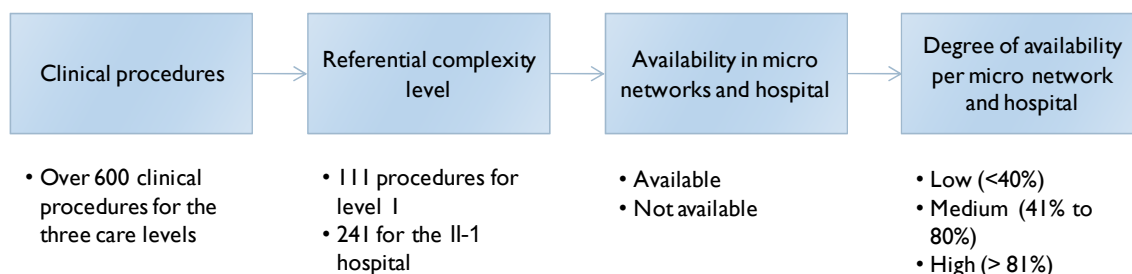
Implementation of sub-step 1.3: description of the effective clinical procedures

As one of the objectives of PMI is to align the health supply with the commitments under the PEAS via strengthening primary and first-level health care, it is necessary to describe the actual capacity of micro networks and the II-1 hospital.

This sub-step aims at identifying, for the available UPSSs, what clinical procedures are actually delivered. In order to do this, the parameters “Referential portfolio of clinical procedures” (comprising more than 600 clinical procedures delivered at the three health care levels) are used. In this case, the referential portfolio used to estimate the investment requirements in the health network is associated with 111 clinical procedures in the case of health facilities I-1 to I-4 and with 241 in the case of II-1 hospitals (see Figure 13).

Figure 13. Description of clinical procedures in the network**Description variables**

- **Clinical procedures.** Each procedure is associated with health service producing units and with referential environments.
- **Level of referential complexity.** The referential portfolio of PEAs procedures is associated with one or more complexity levels, with an aim to identify the physical requirements of the health facilities comprising the health service network.
- **Availability in micro networks and hospitals.** Each clinical procedure in the portfolio will be labeled YES or NO, regardless of whether it falls into the category or not.
- **Availability degree by micro network and hospital.** The availability degree will be estimated by identifying the percentage of available clinical procedures in each health facility by category, in the micro network and in the II-1 hospital.

Figure 14. Variables for the description of procedures in the network**Implementation of sub step 1.4. : Description of available infrastructure**

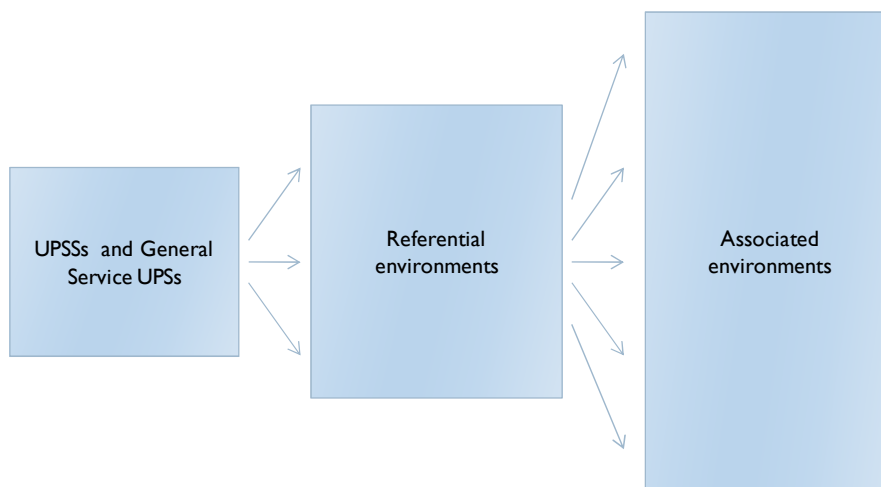
It is necessary to have information on available infrastructure to estimate the degree of effort required to put the micro networks and the II-1 hospitals in optimal operative

conditions. Even if a UPSS with its own infrastructure is in place, it is possible that the number of environments in such infrastructure is insufficient for the planning period or that the structural or functional conditions are inadequate.

The description is based on the parameters described in “Infrastructure parameters for health facilities I-1 to II-1”, which are applied to all health facilities in the micro network and the network hospital.

This step must be carried out by those responsible for the Infrastructure and Equipment area of the DIRESAs and health networks or specialized staff.

Figure 15. Description of available infrastructure in the network

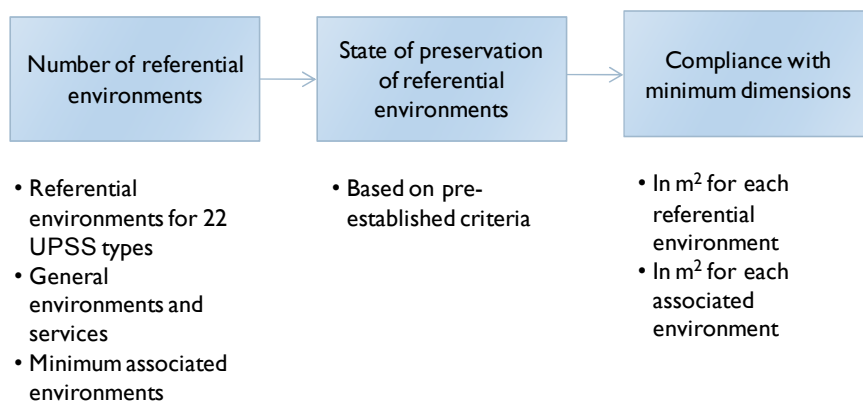


Description variables

- **Number of referential environments.** Using the Infrastructure parameters, the number of referential environments currently available per UPSS in the micro network and in the II-1 hospital is registered.
- **State of preservation.** The information describing the state of preservation will follow the following criteria:
 - **Good.** If the structure is in good state of preservation, the facilities are considered to be suitable and without damage.
 - **Fair.** The structure is suitable, but shows minor damage; the floors are deteriorated; and the walls show superficial cracks. The doors and windows need to be replaced. The electrical and sanitary facilities are in fairly good condition.
 - **Bad.** The structures are not earthquake-resistant. There is structural damage in slabs, roofs, beams, and pillars. Considerable deterioration in roofs made of wood or other materials. Electric and sanitary facilities in bad conditions.

- **Compliance with minimum dimensions.** Register whether the referential environments comply with the dimensions established by the Infrastructure parameters.

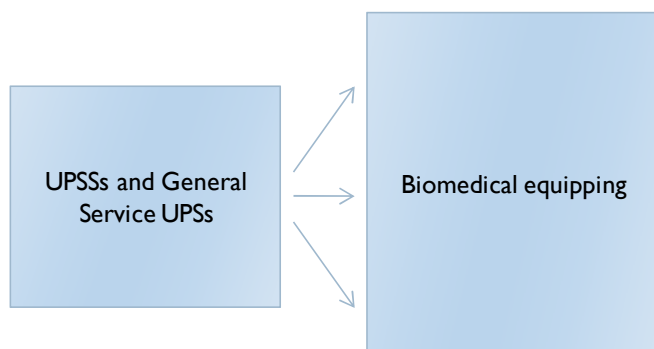
Figure 16. Variables for the description of available infrastructure in the network



Implementation of sub-step 1.5: Description of available equipment

It is necessary to gather information on the available equipment in order to estimate the degree of additional effort required to put the micro networks or hospitals in optimal operative state. Even if a UPSS with its own infrastructure is in place, there may be no equipment, or the equipment available in the infrastructure is insufficient to meet the demand, or the equipment is incompatible with the health facility category.

Figure 17. Description of available equipment in the network



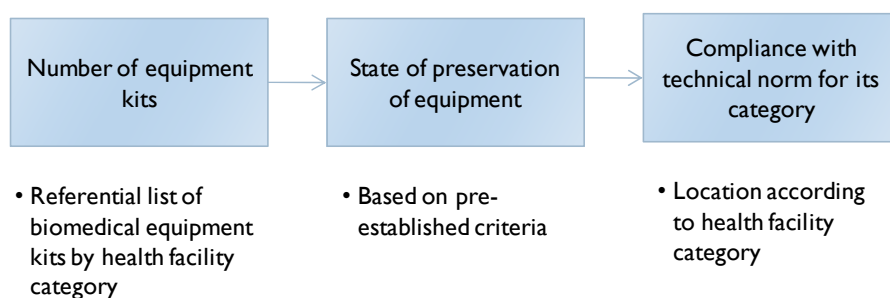
In this regard, it is important to describe the following:

1. The number of equipment kits currently available for each UPSS in the micro network.
2. The state of preservation of the equipment.
3. Compliance with the technical standards for its category.

Description variables

- **Number of available equipment kits.** Using the parameters described in “Parameters for equipment in health facilities I-1 to II-1”, the number of equipment kits currently available for each UPSS in the micro network and the II-1 hospital is registered.
- **State of preservation.** The description of the state of preservation of the equipment is registered for each health facility in the micro network and for the II-1 hospital.
 - **Good.** The equipment is in good condition and works properly.
 - **Fair.** The equipment works, but shows signs of slight damage.
 - **Bad.** The equipment does not work and needs to be replaced.
- **Compliance with the technical standards for its category.** Register whether the availability of the equipment in the health facility complies with the criteria established by the technical norm.

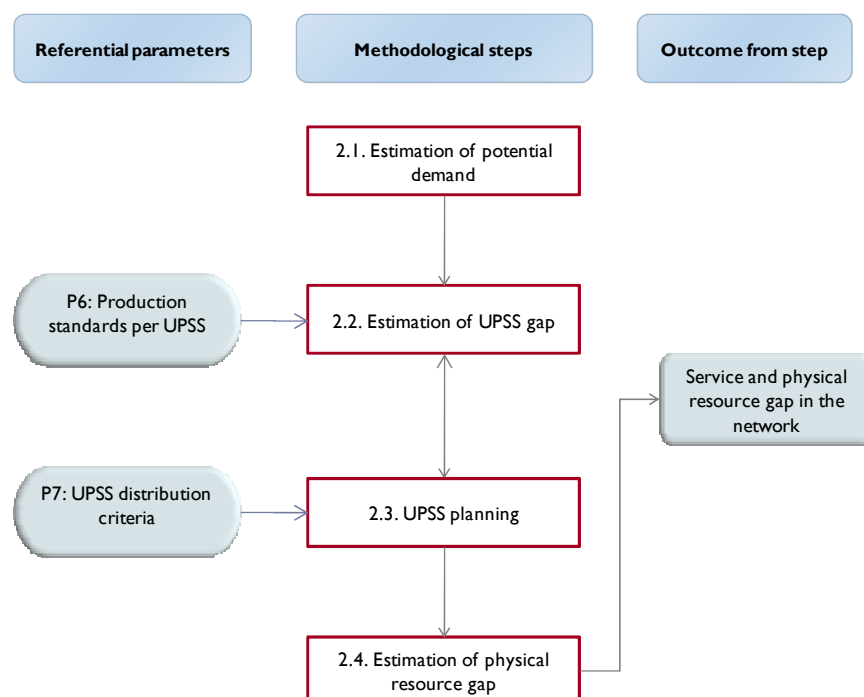
Figure 18. Variables for the description of available equipment in the network



5.10.2 Implementation of Step 2. Supply and demand analysis

The result of the implementation of Step 2 is the PMI chapter entitled “UPSS and physical resource gap in the network”.

Figure 19 shows that Step 2 comprises four sub-steps, which will be instrumental in establishing the number of UPSSs that need to be implemented or strengthened within the health service network. It will also help to identify the magnitude of physical resource requirements (infrastructure and equipment) among facilities in the health service network. In this regard, the technical document suggests two kinds of parameters to facilitate UPSS planning and the estimation of the UPSS and physical resource gaps. The data resulting from the implementation of this step will be recorded in the IDEA, v01 application, developed by the Office of Investment Projects of MINSA’s General Planning and Budget Office.

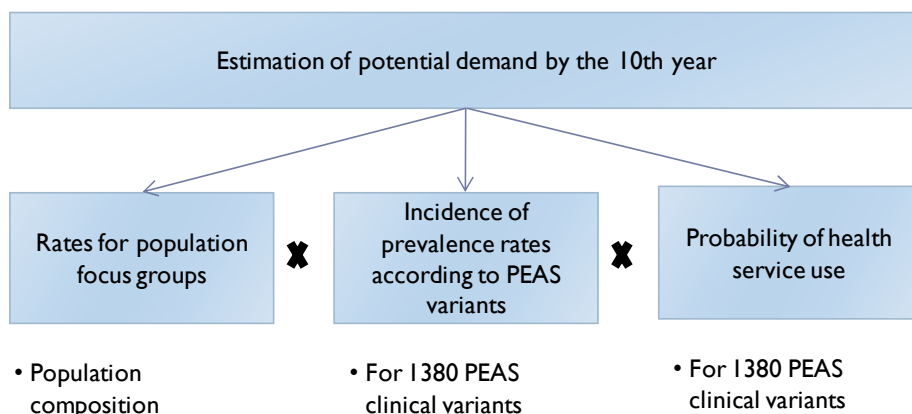
Figure 19. Development of Step 2 (“supply- demand analysis”)**Implementation of sub-step 2.1.: Estimation of potential demand**

The estimation of investment requirements for the next 4-5 years will be based on the estimation of affiliates' potential demand by the 10th year. This requires estimating the health service requirements for the two regimes financed by the SIS: the subsidized and semi-contributory regimes.

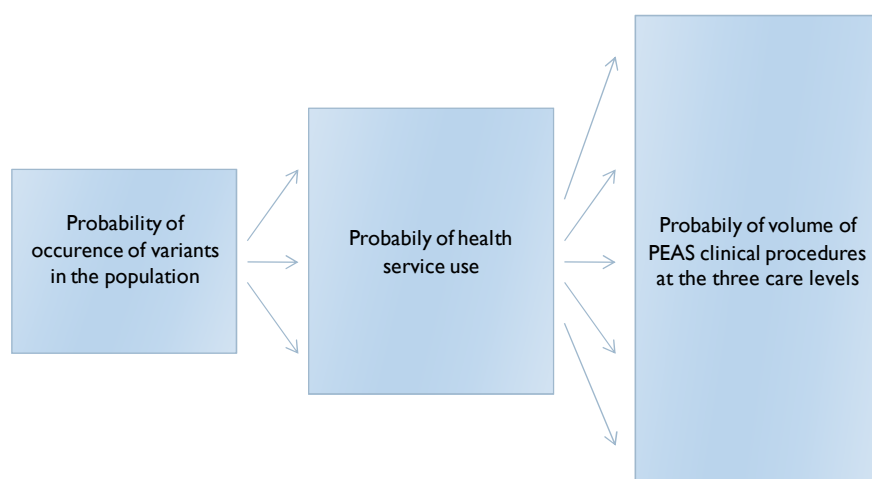
The use of this population parameter is justified by the fact that one of the instruments of the universal insurance reform (the benefit plan) is of an explicit nature, as it establishes 140 insurable conditions to be financed by the public IAFA. Additionally, these conditions are associated with over 600 clinical procedures, which imply new characteristics for the public service provider.

In this regard, the proposed methodology establishes that the estimation of demand should be based on the probabilities associated with case occurrence and the use of health services by affiliates. In both cases, the same nationwide occurrence parameters used for the definition of the content of the PEAS will be used.

Such estimation can be made using the ASEGURA, v.01 application developed by MINSA' Human Health Department (available to those interested), which is instrumental in estimating how many clinical procedures in the benefit plan could be required by the 10th year in the public health system. Such estimation of the volume of procedures will be useful to calculate the types of UPSSs required in a health service network.

Figure 20. Description of the estimation of potential demand**Estimation variables**

- Probability of occurrence of population variants.
- Probability of use of health services.
- Probability for the volume of clinical procedures. The volume of procedures represents a list of more than 600 clinical procedures that could be demanded by affiliates by the 10th year, representing the benefit coverage that all IAFAs must finance. It is done for the three levels of health care.

Figure 21. Variables for the estimation of potential demand in the network

Such information will allow estimation of the of UPSS requirements within the health service network.

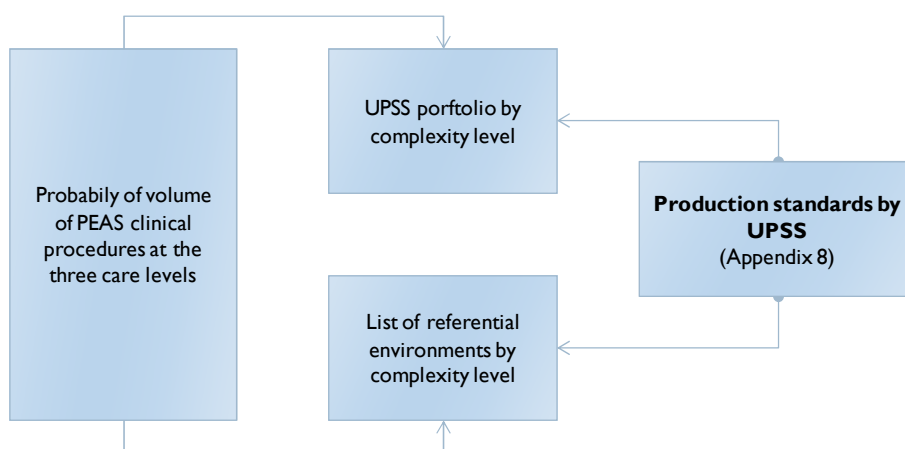
Implementation of sub-step 2.2.: Estimation of the UPSS gap

This sub-step involves two moments. The first one is implemented after estimation of the probability for the volume of clinical procedures for the three health care levels (Figure 22). The second one is implemented after the sub-step “UPSS planning” and decisions

regarding the location of UPSSs within the network have been clarified, as proposed by sub-step 2.3. (Figure 23)

Regarding the first moment, the volume of PEAS clinical procedures for the 10th year is associated with the UPSS portfolio for each complexity level (e.g., outpatient facilities, imaging diagnosis, etc.) and is also associated with a list of referential environments by levels (e.g., medical outpatient facilities, dental outpatient facilities, ultrasound scanning rooms, conventional X-ray rooms, etc.), and an initial number of UPSSs for the network is calculated by dividing the volume of procedures per UPSS/referential environments by the parameter “production standards per UPSS for facilities I-1 to II-1”.

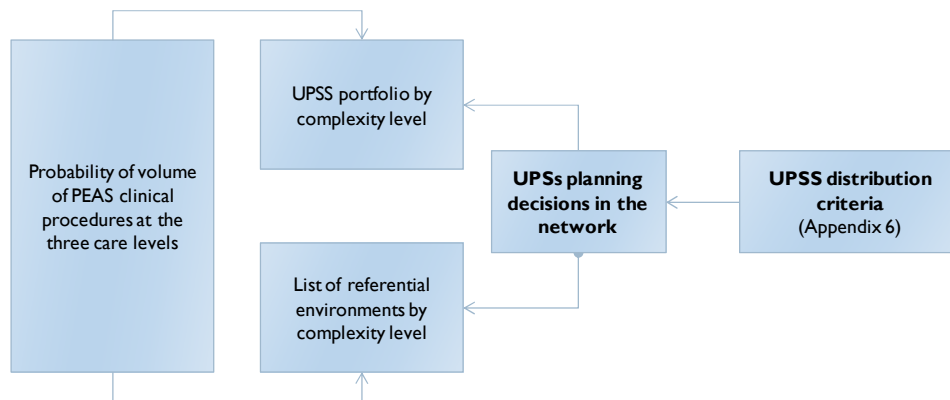
Figure 22: Variables for the estimation of the UPSS gap within the network. First moment



Later, it is necessary to move on to sub-step 2.3. (“UPSS planning”) to estimate the actual UPSS gap (second moment). The latter involves adjusting the first estimation of the gap, and results from the discussion, analysis, and application of the UPSS Distribution Criteria explained in the following sub-step. It uses as main input the decisions regarding the planning of new UPSSs or the strengthening of existing ones (Figures 25, 26, and 27). In sum, the gap will be measured on the basis of UPSS location decisions within the network. In this regard, gaps for two types of variables emerge from the sub-step:

- Number of existing UPSSs that need to be strengthened (either because they are in bad state or their infrastructure is limited) or their technologies need to be renewed (because they are obsolete).
- The number of new UPSSs needed to raise the current resolution capacity of the health facilities comprising the network.

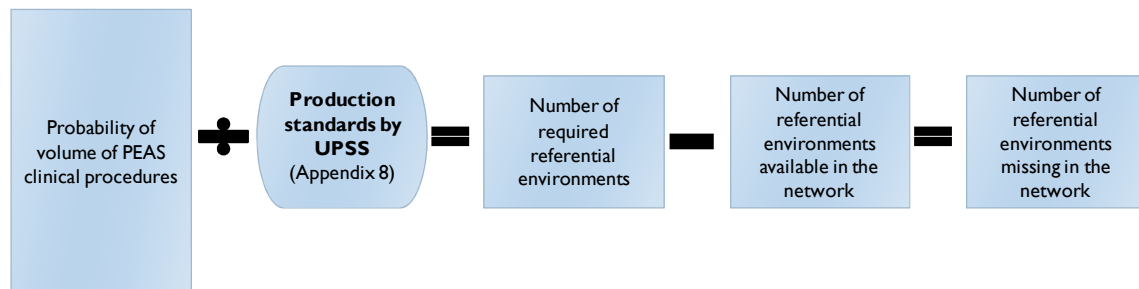
Figure 23: Variables for the estimation of the UPSS gap within the network. Second moment



Estimation variables

- **Probability for the volume of clinical procedures.** The volume of procedures representing a list of more than 600 clinical procedures that could be demanded by affiliates by the 10th year, representing the content of the benefit plan offered by the system to the insured population.
- **UPSS production standards.** A UPSS's productivity ranges in terms of use of the physical space, under the assumption that all necessary resources (human, equipment, inputs) are available. The volume of procedures is divided by the UPSS Production Standards.
- **Number of required referential environments.** Results from dividing the volume of clinical procedures by the UPSS Production Standards. The referential UPSS portfolio (the list of referential environments) is used for this purpose.
- **Number of required UPSS.** Results from estimating the associated referential environments that make up the UPSS.
- **Number of available UPSS in the network.** Uses the information described in Step 1 regarding available UPSSs in the micro networks and in the II-1 hospital.

Number of available referential environment. Uses the information described in Step 1 regarding available UPSSs in the micro networks and in the II-1 hospital.

Figure 24. Variables for the estimation of the UPSS gap within the network

In sum, the exercise is instrumental in identifying the UPSS gap regarding the number of referential environments within the network, using the UPSS Production Standards and the Criteria for UPSS Distribution.

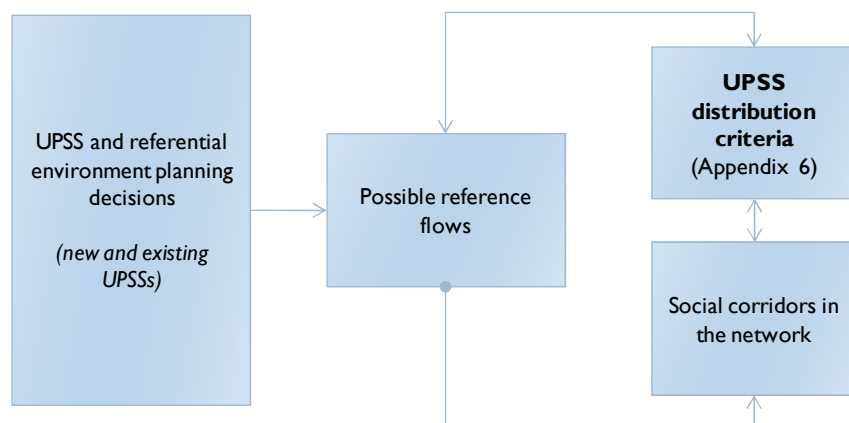
Implementation of sub-step 2.3: UPSS planning

The departure point for the implementation of this sub-step is the result of the estimation of the gap in the first moment in sub-step 2.2.

Decisions regarding the location of UPSSs and their respective referential environments are based on the possible reference flows within the network. In this regard, the planning exercise proposes the parameters named "Criteria for the distribution of UPSSs and referential environments for facilities I-1 and II-1". The possible reference flows will depend on the social corridors in the network (Figure 25).

Four types of criteria are proposed for the analysis and location of UPSSs: a) criteria associated with the category (NTS Categorization); b) criteria associated with demand (regarding the referential population); c) correction criteria for rural areas (based on the time to move between EESSs); and d) criteria associated with territorial sanitary priorities.

It is proposed to establish the location of UPSSs (new ones as well as those that need to be strengthened or renewed) in the same planning unit maps used to review the diagnosis of UPSS installed capacity.

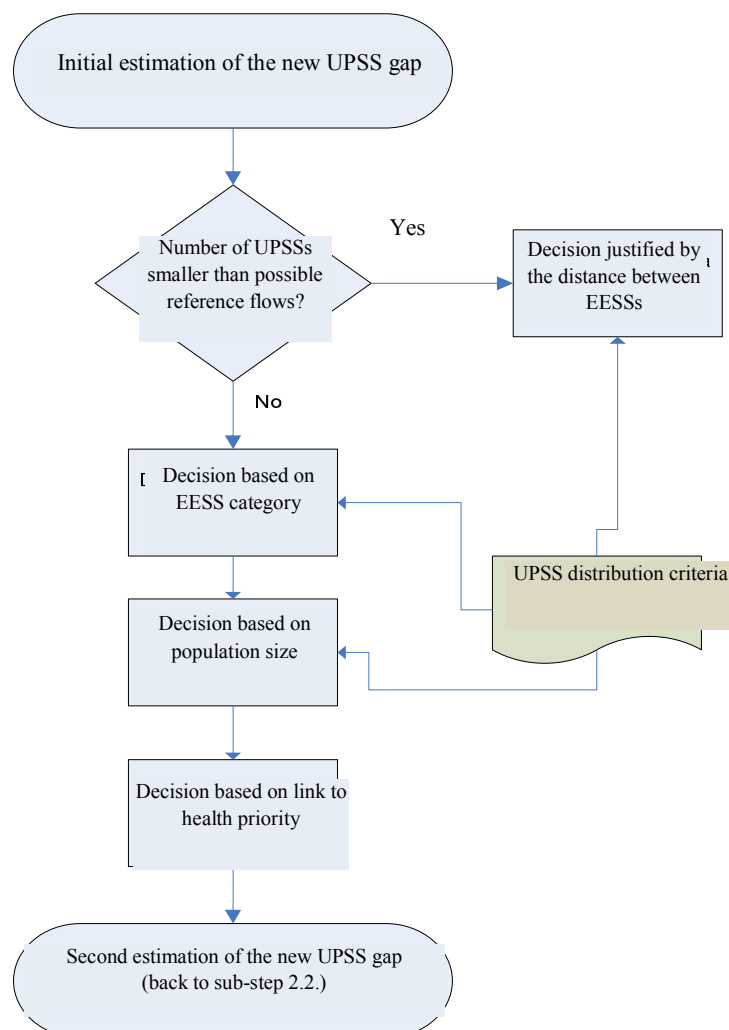
Figure 25. Description of UPSS planning within the network

Planning decisions for new UPSSs

A first question is related with the decisions concerning new UPSSs. In this regard, the group will establish what types of UPSSs are needed to meet the commitments under the public insurance benefit plans and the public health programs of the health service network. This refers to new UPSSs that are not currently available and are necessary to widen the benefit coverage considered and the health care plans and programs.

The following planning algorithm is proposed:

Figure 26. Decision flow chart for planning new UPSSs in the network



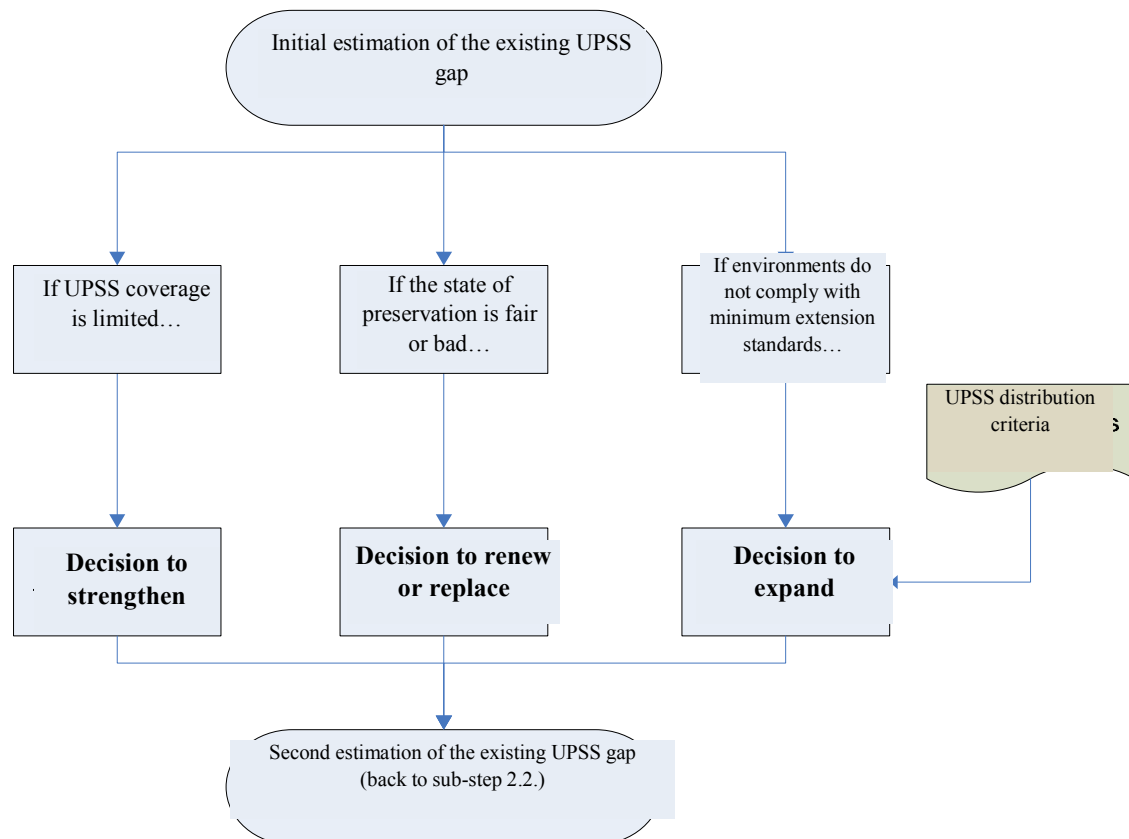
Planning decisions for existing UPSSs

Another question addressed in this sub-step is concerned with existing UPSSs. In this regard, the group will respond if the current UPSSs comply with the normative specification in terms of size and state of preservation. If the diagnosis in Step 1 establishes a failure in complying with minimum UPSS referential areas or reveals that the equipment is obsolete, then **it is necessary to strengthen or renew the UPSSs**. According to the characteristics

of UPSSs, the following options may be considered: a) strengthen UPSSs via an increase in the volume of procedures; b) renew or replace UPSSs due to unsatisfactory state of preservation of the infrastructure and/or equipment; and c) expand UPSSs due to failure to comply with architectonical parameters.

The following algorithm for decisions regarding existing UPSSs is proposed:

Figure 27: Decision flow chart for planning existing UPSSs in the network



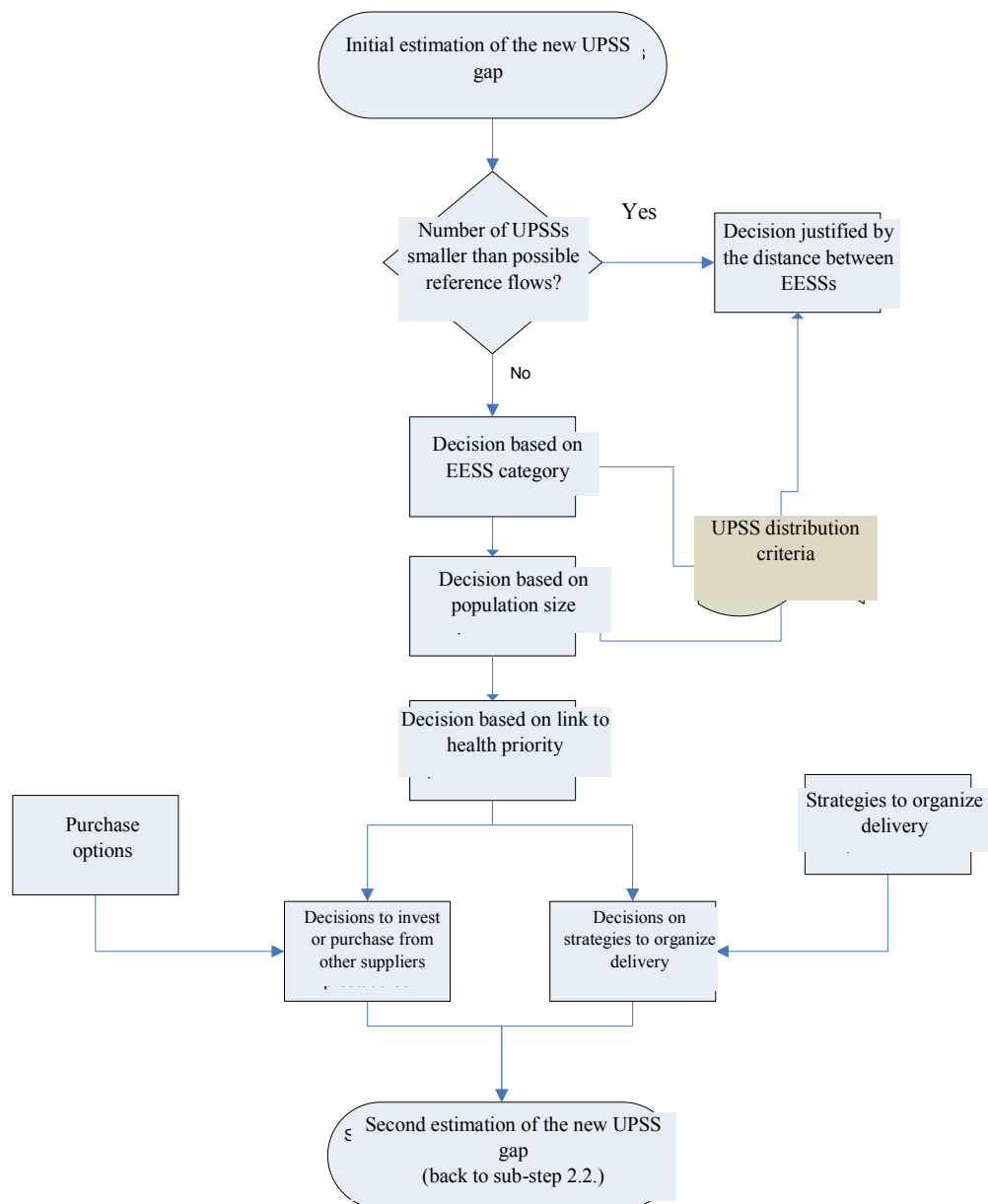
In each case it is relevant to identify available UPSSs in separated maps in order to identify current reference flows and the times to move between health facilities within a health service network. This will allow a better identification and analysis of UPSS or health facility requirements. It is possible that there are UPSS with investment requirements, but which according to the reference flow analysis do not require to be strengthened in the current point of attention.

All UPSS planning decisions within the network—for both new and existing UPSSs— will be taken as reference for the estimation of the actual UPSS gap (the second moment described in step 2.2.) and the physical resource gap that will be treated in the following sub-step.

UPSS planning the metropolitan urban areas

In the case of metropolitan urban areas, where providers are of a different legal nature, it may be possible to cover the UPSS gap by purchasing services from them, thereby orienting investment resources to other UPSSs where the gap is greater. In such cases, the diagnosis proposed in Step 1 would have to consider gathering information from the other providers in the health network.

At the same time, it is also possible that in metropolitan urban areas, in the cases of clinical pathology (laboratory) and imaging diagnosis UPSSs, estimation of UPSS requirements requires a previous identification exercise for the organization strategy needed to reduce requirements; e.g., organizing a centralized laboratory with sampling points in all facilities or a single imaging diagnosis center for several networks, depending on their extension, among other organizational strategies. Along these lines, the decision algorithm for new UPSSs in metropolitan urban areas is as described in Figure 28.

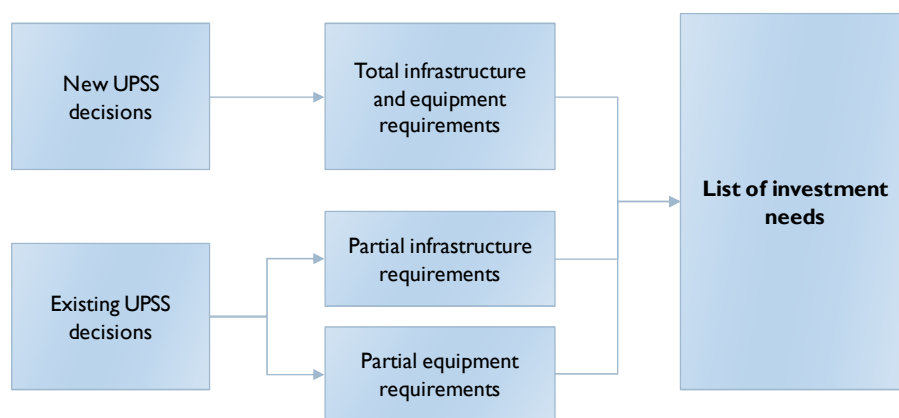
Figure 28. Decision flow chart for planning new UPSSs in metropolitan urban areas**Implementation of sub-step 2.4.: Estimation of the physical resource gap**

The physical resource (infrastructure and equipment) gap is measured for each UPSS. The gap is associated with the UPSSs whose planning was decided in the previous sub-step. The decision is concerned with planning new UPSSs within the network or strengthening, expanding, renewing, or replacing existing UPSSs (see Figure 27).

The gap may be total (for new UPSSs) or partial (for existing UPSSs), and is associated with investment in infrastructure and equipment. Planning decisions must be registered in the IDEA v01 application.

The description of the requirements is detailed in a **list of investment needs**. The latter must be presented for each UPSS, either for the health facility or the micro network (in the case of a UPSS that would offer all the services; e.g., implementation of a laboratory in the micro network head and of sampling areas in the other health facilities). Each need must be contrasted against the infrastructure and equipment gap estimated in sub-steps 1.3. and 1.4.

Figure 29. Variables for the estimation of the physical resource gap within the network



The following list of investment needs is provided as example:

- Implementation of the clinical pathology (laboratory) UPSS in the San Pedro CS and of sampling areas in 6 EESSs within the San Carlos micro network (infrastructure and equipment gap: 100%).
- Strengthening of the obstetrical internment UPSS at the San Carlos CS (infrastructure and equipment gap: 60%).
- Implementation of the delivery room at the San Pedro CS (infrastructure and equipment gap: 100%).
- Strengthening of the multiple use room at the San Pedro CS (infrastructure and equipment gap: 30%).
- Implementation of the ambulance service for the obstetrical-perinatal network at the San Carlos micro network (infrastructure and equipment gap: 100%).
- Implementation of the scanning room at the San Pedro CS (infrastructure and equipment gap: 100%).

The outcome of this step is the UPSS and associated physical resource gap in the planning unit, measured in number and percentage. It can be expressed as follows:

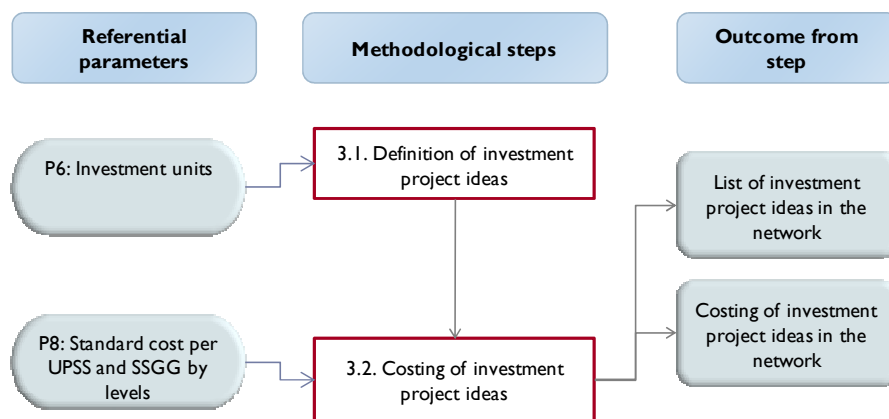
- Infrastructure gap (percentage per investment need).
- Equipment gap (percentage per investment need).

5.10.3 Implementation of Step 3: Dimensioning of investments

This step aims at identifying the list of investment project ideas, estimating their value in nuevos soles, and classifying them. The main input is the **UPSS and physical resource gap**, expressed as the list of investment needs established in the previous step.

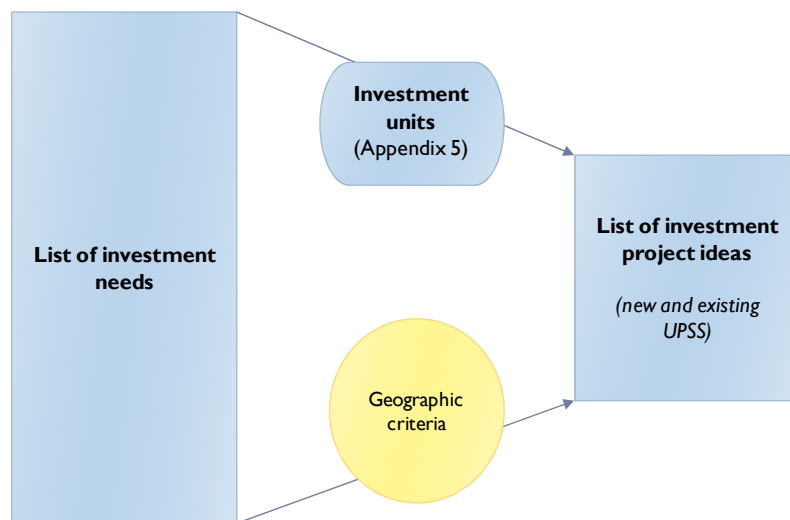
The list of **investment project ideas** is made up of proposals for strengthening, expanding, renewing, or replacing existing UPSSs or implementing new UPSSs. Neither the timeframe for development nor any kind of prioritization is considered at this stage. The data resulting from implementation of this step is registered in the IDEA, v01 application.

Figure 30. Development of Step 3, “dimensioning of investments”



Implementation of sub-step 3.1.: Definition of investment project ideas

This step is based on the UPSS gap established in the previous step. As has been discussed, the UPSS and physical resource gap is reflected in a List of Investment Needs, which in turn becomes a List of Investment Project Ideas.

Figure 31. Variables for the definition of investment project ideas

The parameters called **Investment Units** are used as geographical criteria. The Investment Units are eight kinds of combinations of investment needs, which need to be implemented for a comprehensive development of health facilities. The geographical criteria are development options for a set of UPSSs aimed at expanding the supply capacity of the micro network or the II-1 hospital. In the case of the micro network, the investment project ideas could be presented for a health facility, for two or more health facilities, or for the entire network. The predominant criterion is the resolution capacity needed to bring services provided by health facilities in line with the population's needs.

In this regard, decision-makers must establish for each micro network all the possible investment project ideas together with the list of needs that originated them, so that they can be considered in the formulation of pre-investment studies.

As an example, an investment project idea is presented using the list of investment needs established in sub-step 2.4. In this example, six investment needs turn into a single investment project idea. The parameter Investment Unit 2 ("mother and children care") was used for this purpose.

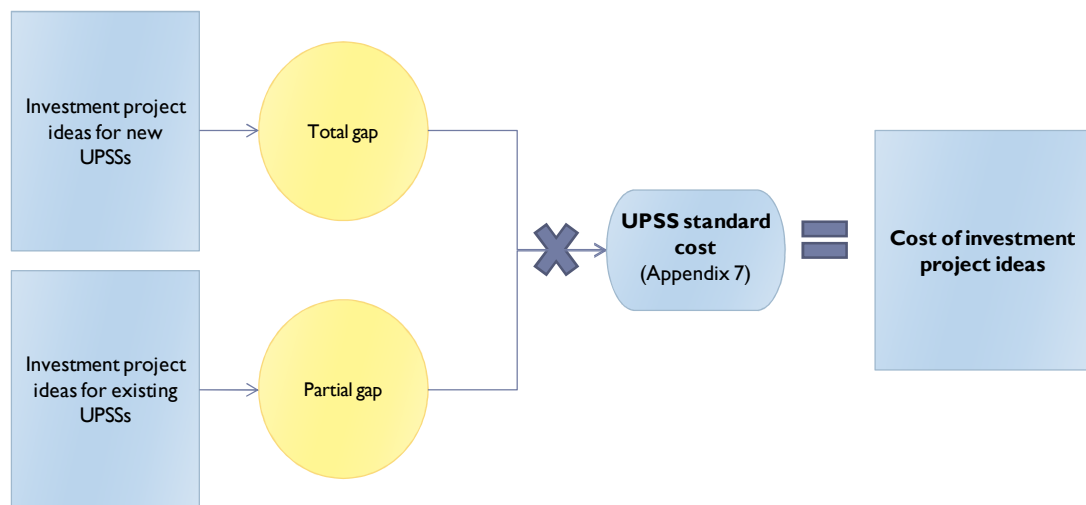
Table 2: Investment needs and investment project idea

Investment needs and physical resource gap	Investment project idea
Implementation of the clinical pathology (laboratory) UPSS in the San Pedro CS and of sampling areas in 6 EESS within the San Carlos micro network (infrastructure and equipment gap: 100%).	Implementation of comprehensive maternal-perinatal services at the San Pedro CS for the San Pedro and San Carlos micro networks.
Strengthening of the obstetrical internment UPSS at the San Carlos CS (infrastructure and equipment gap: 60%).	
Implementation of the delivery room at the San Pedro Cs (infrastructure and equipment gap: 100%).	
Strengthening of the multiple use room at the San Pedro CS (infrastructure and equipment gap: 30%).	
Implementation of the ambulance service for the obstetrical-perinatal network at the San Carlos MR (infrastructure and equipment gap: 100%).	
Implementation of the scanning room at the San Pedro CS (infrastructure and equipment gap: 100%).	

Implementation of sub-step 3.2.: Costing of investment needs

In this sub-step the magnitude of the gap is quantified. For this purpose, the physical resource gap (the list of investment needs) is multiplied by the cost of the UPSS.

In the case of the ideas for new UPSSs, the gap is 100% and is multiplied by the standard cost of the UPSS. Likewise, in the case of investment project ideas associated with existing UPSSs, the gap is partial and is multiplied by the cost of the UPSS. The value for the list of investment project ideas before the prioritization is thus obtained. The parameter Standard UPSS Cost is used for this purpose.

Figure 32. Variables for the costing of investment project ideas

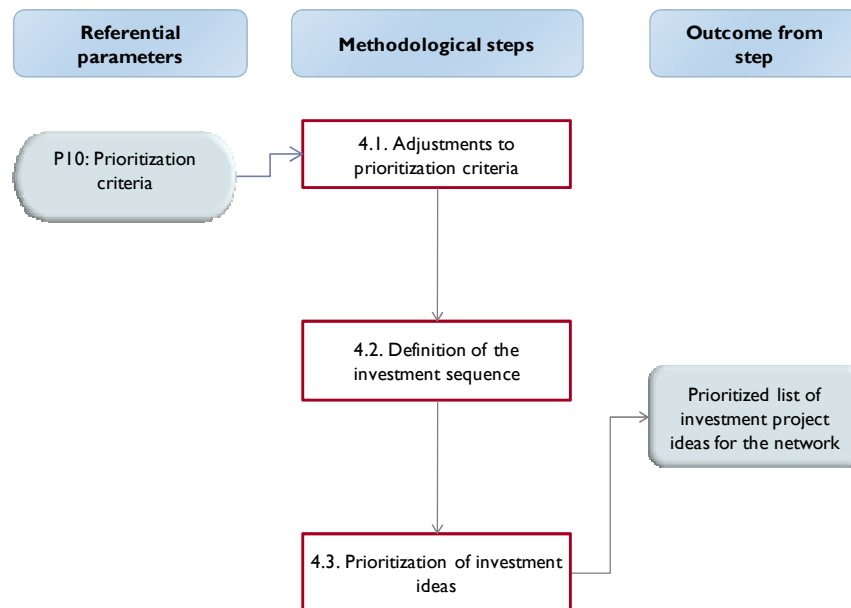
5.10.4 Implementation of Step 4: Prioritization of investment project ideas

This step involves defining the prioritization of the investment projects identified in the planning unit (networks).

The prioritization is based on two basic criteria: a) regional and local sanitary criteria associated with demand (morbidity-mortality, density, and population dispersion); and b) criteria for supply organization (access to and distance from health facilities). It is crucial to put in place a health network system.

At the beginning of this stage there is already a list of possible investment projects whose size has been established (with their cost in nuevos soles) and that need to be sorted and prioritized.

First, prioritization is carried out on the basis of the investment gaps identified as a result of the supply-demand analysis at the regional government level. Services with little or no operative capacity to respond to the challenges of the universal insurance reform are identified. The data resulting from the implementation of this step are registered in the IDEA, v01 application developed by the Office of Investment Projects of MINSAS'S General Planning and Budget Office (available to the public).

Figure 33: Implementation of Step 4, “Prioritization of investment project ideas”**Implementation of sub-step 4.1.: Adjustment of prioritization criteria**

Keeping in mind that the prioritization criteria presented in this document are referential, it is proposed that, before initiating the prioritization exercise, the PMI Team—a technical-political committee—should review, discuss, and adjust them. The results can be of two types: a) the criteria proposed by the technical document are confirmed, and will therefore be used to carry out the prioritization; or b) the criteria are adjusted and then used to carry out the prioritization.

It is proposed to carry out this sub-step in a narrow meeting. The resulting adjustments must be sanctioned by the highest regional government officials.

Implementation of sub-step 4.2.: Definition of the investment sequence

This sub-step aims at reconciling the opinions of the technical personnel and of the high regional government officials regarding investment requirements in health.

It is proposed that the regional government should establish the prioritization of investment project ideas, which could be influenced by the commitments assumed by the highest officials. The following is an example of an investment sequence for a regional government:

- First priority: Regional hospitals.
- Second priority: Districts with the highest poverty index.
- Third priority: Provincial capitals.
- Fourth priority: The remaining ideas.

That is, the prioritization proposed in the next sub-step is carried out by the technical personnel based on the political prioritization (investment sequence).

Implementation of sub-step 4.3.: Prioritization of project ideas

Each investment project idea resulting from implementation of Step 3 is prioritized by the PMI Team in a wide meeting with representatives from the networks and micro networks. The group discusses the score given to each idea using the following criteria (in case they have not been adjusted by the PMI Team):

- i. Criteria associated with demand
 - a. Requirement linked to a regional or local priority.
 - b. Requirement linked to improved access to a dispersed population.
- ii. Criteria associated with supply
 - a. Requirement originated by the magnitude of the gap.
 - b. Requirement originated by difficult access to the nearest available services.

Requirement originated by production's insufficient capacity to meet demand.

Table 3. Prioritization Criteria

Prioritization criteria	Scores
1. Requirement linked to a regional or local priority.	1 – Not linked 2 – Indirectly linked 3 – Directly linked
2. Requirement linked to improved access to a dispersed population.	1 – Not linked 2 – Indirectly linked 3 – – Directly linked
3. Requirement originated by the magnitude of the gap.	1 – Low 2 - Medium 3 – High
4. Requirement originated by difficult access to the nearest available services.	1 – Easy access 2 – Moderate access 3 – Difficult access
5. Requirement originated by production's insufficient capacity to meet demand.	1 – Low occupied capacity 2 – Optimal occupied capacity 3 – Over-occupied capacity

If the criteria have been adjusted by the regional government, as proposed in sub-step 4.1., the prioritization will be carried out using the new criteria.

5.10.5 Implementation of Step 5: PMI elaboration and approval

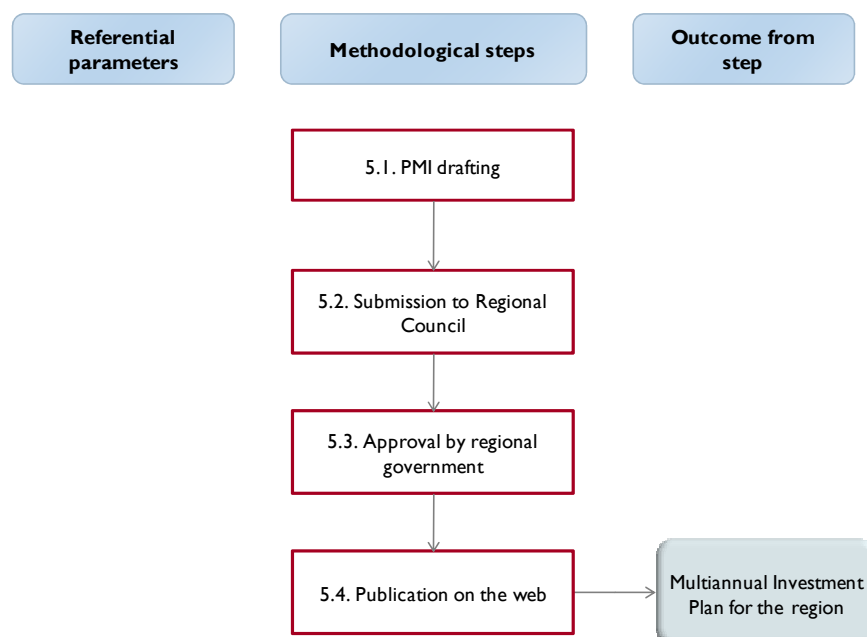
This step consolidates all the outcomes resulting from the previous steps. Drafting of the PMI must be carried out by the PMI Team and monitored by the regional government's planning and budget office.

The result will allow coordinating investment resource allocation and establishing commitments between relevant actors and territorial government levels. It will also be useful to the personnel in charge of formulating pre-investment studies to apply correctly the analysis and decision elements considered when presenting the investment project ideas.

The final version of the document must be submitted to the Regional Council of the regional government for approval.

It is proposed that the PMI in health for each regional government be published on the website of the General Directorate of Investment Policy (DGPI) of the Ministry of Economy and Finance.

Figure 34: Implementation of Step 5, “PMI elaboration and approval”



Implementation of sub-step 5.1.: PMI drafting

Drafting of the PMI will be in charge of the PMI Team.

The regional PMI in health will be drafted taking into consideration the relevant legislation for the elaboration of health sector normative documents. In the case of the regional PMI, a technical document with the following structure is required:

Title: Regional Multiannual Investment Plan in Health.

Contents: Ordered list of the items treated in the document.

Introduction: A brief summary of the subject developed explaining its relevance to the current health situation, including background information and the needs that justify it. It must include a brief comment on the content of the technical document.

Aim: Explain the impact of the distribution and application of the content of the technical document. Relevance for the identification, formulation, and evaluation of investment projects in health, prioritized at the regional and local level, as a basis for strengthening the operative capacity of health facilities.

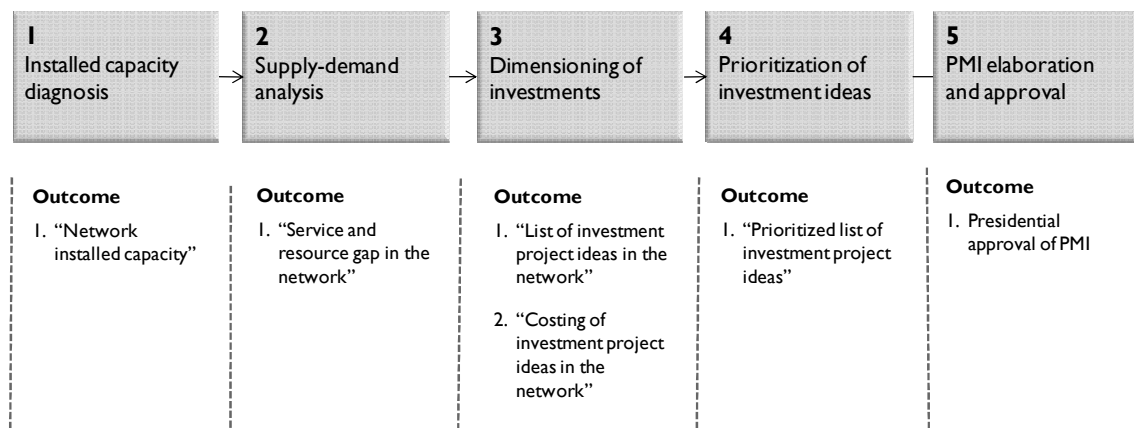
Objective: The objectives to be achieved through the diffusion and use of the technical document, including the criteria for measurement and analysis. Specifically, the PMI must include an explanation of the objectives to be achieved through a technical document that integrates and articulates investments in health at the regional government level.

Legal basis: Only when relevant. It specifies the legislation in force associated with the technical document, detailing the relevant articles.

Scope of application: It established to whom and where it should be applied. The PMI is relevant for all MINSA facilities at the regional level, in articulation with other public and private facilities in the regional government.

Contents: Depending on the objectives stated, it is recommendable to specify the outcomes from each step, as shown in the following figure:

Figure 35: Outcomes from the regional PMI document



Implementation of sub-step 5.2.: Submission to the Regional Council

Prior to submission to the Regional Council, the final version of the PMI must be disclosed to officials from the investment offices of the regional government and the DIRESA. It should

also be communicated to officials from the DIRESA's human health, health service, health quality, and information and statistics departments, among others.

Implementation of sub-step 5.3.: Approval by the Regional Government

Once approved by the regional government, the pre-investment studies to be financed in the short- and medium-term should be indicated. The approved document must clarify the source of the resources to finance the plan.

Implementation of sub-step 5.4.: Posting on the web

The regional PMIs will be posted on the website of the General Directorate of Investment Policy (DGPI) of the Ministry of Economy and Finance.

6. Recommendations for Implementation

- With an aim to obtain financing commitments from participants and government levels, the PMI must be communicated to local governments and socialized within the Participatory Budget instances developed annually (Regional and Local Coordination Councils, among others).
- In the case of local governments participating in the formulation of the PMI, the investment project ideas that could be financed by them must be approved by the Municipal Council.
- As the PMI is a planning instrument for investment regarding facilities I-1, I-2, I-3, and II-1, regional governments are advised to request funding for investment project ideas from the Fund for the Promotion of Public Regional and Local Investment (FONIPREL).
- It is desirable that regional governments promote the training of facilitators for the implementation of Step 1 ("diagnosis of installed capacity"). Its implementation is crucial and its content will depend on the quality and consistency of the formulation process.
- The investment project ideas resulting from the implementation of the PMI will be contrasted with the pre-investment studies and/or projects under implementation.
- The General Planning and Budget Office of the Ministry of Health, through the Office of Investment Projects, will provide technical assistance to regional governments for the implementation of the methodology described in this document.